



THE USE OF ALTERNATIVE DISPUTE RESOLUTION TECHNIQUES IN UNITED
STATES AIR FORCE ENVIRONMENTAL CONFLICTS

THESIS

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AFIT/GSP/ENV/05M-08

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THESIS

Presented to the Faculty

Department of Systems and Engineering Management

Graduate School of Engineering and Management

Air Force Institute of Technology

Air University

Air Education and Training Command

In Partial Fulfillment of the Requirements for the
Degree of Master of Science in Strategic Purchasing

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March 2005

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Abstract

The use of alternative dispute resolution (ADR) in government disputes is mandated by the Administrative Dispute Resolution Act of 1990. The use of ADR to resolve disputes provides a quick and inexpensive resolution versus litigation. The Air Force currently has a very strong ADR program in place to resolve acquisition and workplace disputes. However, the varied conditions and situations of environmental issues have prevented the Air Force from achieving similar success in this area. This research analyzes the experiences of twenty-six Environmental Conflict Resolution Practitioners who have resolved environmental disputes using ADR techniques. Content analysis and pattern matching were used to provide insight into the current use of ADR techniques in military environmental disputes. The insight gained from this research provides the Air Force with information to better understand the current practices in environmental ADR and also provides areas for further research.

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To My Loving Family

Acknowledgements

I would like to thank Mr. Rick Southern and Ms. Lynda O’Sullivan, SAF/GCD, for their support and sponsoring of this effort. Also, I would like to thank Lieutenant Colonel Ellen England, Major Bryan Hudgens, and Mr. Leon Mable for their feedback, support, and time. Also, I would like to thank all of the Environmental Conflict Resolution Practitioners that allowed me to interview them for this research effort.

Finally, I would like to thank my husband and children for their continuing support, and unending patience with my effort to complete this work. I love you all very much.

Nanci R. Pigeon

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THE USE OF ALTERNATIVE DISPUTE RESOLUTION TECHNIQUES IN UNITED STATES AIR FORCE ENVIRONMENTAL CONFLICTS

I. Introduction

Background

Alternative Dispute Resolution (ADR) is an umbrella term that refers to means of settling disputes other than through court adjudication (Nolan-Haley, 1992:1). Some of the more familiar terms used for ADR techniques are negotiation, mediation, and arbitration but ADR covers a much wider spectrum. Singer (1994:16) provides one classification of ADR techniques and how each one fits into the ADR process (see figure 1). Unassisted negotiation is the basic form of dispute resolution; it occurs between the parties without any outside help. Assisted negotiation is divided into two general categories of techniques. In mediation the parties are assisted by a third party neutral to come to an agreement. Outcome prediction occurs when the parties have a third party predict the most likely outcome if the case were to be adjudicated, which in most cases leads to a settlement. Adjudication occurs when the parties cannot come to an agreement and a third party determines the outcome.

Unassisted Negotiation	Assisted Negotiation		Adjudication
	Mediation	Outcome Prediction	
	Conciliation	Neutral Evaluation Fact-Finding	Arbitration
	Facilitation	Ombuds and Complaint Programs Mini-trial	Agency
	Regulatory- Negotiation	Summary Jury Trial Nonbinding-Arbitration Mediation-Arbitration	Court

Figure 1. The ADR Spectrum

The further the parties move to the right on the spectrum, the less control the parties will have and the higher the cost will be (Singer, 1994:15). Generally, the ADR process is voluntary and is initiated by the parties involved to obtain a mutually acceptable resolution (Bingham, 1986:5). In fact, the most successful ADR outcomes are between parties that have ongoing relationships (Nolan-Haley, 1992:3). In most instances, the use of ADR to resolve an issue saves time and money over litigation and also tends to produce a better outcome that all parties can live with (Nolan-Haley, 1992:4; Singer, 1994:13).

Because ADR promises several significant benefits, the Federal government mandated the use of ADR in any case in which the government was a party through the Administrative Dispute Resolution Act (ADRA) of 1990 (amended in 1996). The Act included the finding that the use of ADR offers “a prompt, expert, and inexpensive means of resolving disputes as an alternative to litigation in the Federal courts” and “such alternative means can lead to more creative, efficient, and sensible outcomes.” (ADRA, 1996:1)

General Issue

It is Air Force policy to use Alternative Dispute Resolution (ADR) to the maximum extent practicable to resolve disputes at the earliest stage and at the lowest organizational level possible (AFPD 51-12, 2003:2). The Deputy General Counsel of the Air Force for Dispute Resolution (SAF/GCD) has overall responsibility for the AF Dispute Resolution Program, including specifically to: 1) be the proponent for establishing and implementing Air Force ADR policy, guidance, and regulations, 2)

submit, manage, and execute the Air Force ADR Program budget, 3) encourage, develop, and implement initiatives, activities, and training related to ADR throughout the Air Force, 4) identify and eliminate unnecessary barriers to the use of ADR, 5) ensure Air Force personnel are aware of and have access to existing ADR resources, and 6) prepare a summary report to the Secretary of the Air Force by December 30 of each year regarding progress made in implementing the Air Force ADR program (AFPD 51-12, 2003:2).

In its fiscal year 2003 summary report to the Secretary of the Air Force, the Air Force ADR Program Office listed six of its most important successes of the year as:

- In August 2003, the Air Force received the American Bar Association “Lawyer as Problem Solver” award for the outstanding institutional contribution to ADR for the sixth year in a row.
- ADR helped the Air Force avoid \$137 million in liability in resolving contract disputes much more quickly than if the disputes had been litigated.
- The Air Force resolved 2,007 civilian workplace disputes using ADR.
- The successful use of ADR in Equal Employment Opportunity (EEO) complaints resolved the average complaint in just 28 days, compared to 440 days using all resolution methods.
- The Air Force completed its development of a negotiation-training course for acquisition professionals in conjunction with the Defense Acquisition University.
- Between FY97 to FY03, informal EEO complaints declined 70% and formal complaints declined 50%. The Air Force believes that conflict-management training combined with ADR training and usage significantly contributed to this improvement.

The results suggest that the Air Force has an excellent ADR program in place to handle workplace and acquisition disputes. However, in the annual report only a small paragraph reported Air Force environmental ADR usage. The Air Force has had a hard

time implementing ADR in environmental issues because the circumstances surrounding an environmental issue are not as clear cut as those in workplace and acquisition (Southern, 2004:1).

In a federal workplace dispute, such as an equal opportunity complaint, a formal dispute resolution process exists. Before filing an official complaint with the agency, the first step in the process is for the complainant to contact an equal employment opportunity counselor within 45 days of the alleged discrimination. The complainant can then choose to have counseling or ADR to resolve the complaint. Counseling must be completed within 30 days and ADR must be completed within 90 days. When counseling is complete or if ADR is unsuccessful, the complainant can then file an official complaint with the agency (Equal Employment Opportunity Commission, 2003).

The ADR process in federal acquisition disputes is spelled out by the Federal Acquisition Regulation (FAR). FAR part 33.214(a) states that the objective of using ADR is to increase the opportunity for an inexpensive and quick resolution. A contracting officer may use ADR procedures at any time that the contracting officer has authority to resolve the issue in controversy. The ADR process can occur at any point in the contract dispute process as long as both parties agree to the procedure (FAR 33.214, 2004:784). The FAR does not give a formal timeline for an informal ADR process. However, if ADR is used after a formal claim has been made in accordance with FAR part 33.2; the timelines of the formal claim are still operative if the ADR process fails.

Both the workplace and acquisition ADR programs appear to be serving the Air Force well. Environmental ADR, however, is less successful. The next section provides an overview of environmental ADR.

Environmental ADR

The Environmental Protection Agency (EPA) uses ADR to help prevent or resolve issues with outside parties for many reasons including adjudications, rulemaking, policy development, administrative and civil judicial enforcement actions, permit issuance, stakeholder involvement, negotiations and litigation (Federal Register, 2000:81859). The decision to use ADR in any of these matters requires an assessment of the parties, issues, and other factors. Typical environmental disputes can involve issues such as land use, water resources, natural resource management and air quality. The parties involved in environmental disputes can range from one party to hundreds of parties and fall into several categories for example federal government, state government, local government, citizen groups, environmental groups, and various other private interest groups.

The minimum guidelines for determining the use of ADR in EPA cases is section 572 of the ADRA and any EPA guidance on ADR techniques or use in specific types of disputes (Federal Register, 2000:81859). Each case is assessed separately to determine if ADR will be used.

In the environmental area, the Air Force has challenges with cleanup and remediation issues. This area falls under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980; typically these violations are turned over to the district courts and that process is controlled by the Department of Justice (DOJ). The district court must approve the consent decree executed by the parties and the DOJ must approve the final results on behalf of the United States. The ADR process can be used to negotiate the consent decree but it requires up front coordination

with the DOJ (O'Sullivan, 2004:1). The ability to apply the ADR process in a timely manner in the process is the biggest problem the Air Force faces in the environmental arena (Southern, 2004:1).

Problem

The Air Force has a strong ADR program to resolve workplace and acquisition disputes and is committed to using ADR in all areas possible. However, the varied conditions and situations of environmental issues have prevented the Air Force from achieving similar success implementing ADR in resolving environmental disputes. The purpose of this research is to determine when and how ADR techniques are utilized in environmental disputes and then determine how the Air Force can use this information to further its ADR program.

Research Question

Specifically, this study will focus on the following research question:

How can the Air Force become more involved in environmental ADR and use it more effectively?

Investigative Questions

In order to answer the overarching research question the following questions based on the primary research question will need to be answered:

- 1) What are typical environmental disputes?
- 2) Who are the parties in a typical environmental dispute?
- 3) How are environmental disputes different from workplace and acquisition disputes?
- 4) Which ADR techniques are used to resolve environmental disputes?

- 5) What types of environmental disputes are best suited for resolution by ADR?
- 6) What are the antecedents of a successful environmental ADR program?
- 7) What barriers exist to implementing the process for the Air Force?

Proposed Methodology

The research question can be answered through a content analysis of data gathered through an exploratory study. Data will be collected through a semi-structured interview of environmental conflict resolution practitioners who have experience with military related environmental conflict resolution. The interview questionnaire will contain questions that map to the investigative questions and ultimately the research question. Once the interviews are complete the data will be analyzed for content, pattern, and frequency in regard to the specific investigative question. The analyzed data will then be used to construct a model that will answer the overall research question. Finally, this model will be validated for accuracy by a panel of subject matter experts.

Proposed Study Contributions

This research is meant to provide vital information to the Air Force ADR Program Manager in order for the Air Force to use ADR techniques more effectively in environmental disputes. The study also contributes a tentative model of environmental ADR antecedents that can be tested and refined with subsequent studies. The outcome of this research will also have an effect on the ADR field as a whole because this research will focus on the entire process and not just ADR success as seen in the literature review. Ideally, this will encourage environmental ADR experts to conduct more research and thereby refine the process for the entire field.

Summary

This chapter has provided information on the general issue at hand—the Air Force has a solid ADR program in place for acquisition and workforce issues but has been less successful in fully implementing the ADR process in the environmental arena. One of the reasons for this may be that the workplace and acquisition ADR processes are solidly in place and working well, while the environmental ADR process appears not to be so effective. The issue at hand then is how can the Air Force develop a process to fit the environmental area? Seven research questions were developed that, when answered through this research, should provide insight and answers to this problem.

Overview

The remainder of this thesis is organized as follows. Chapter II is a literature review that provides a history of the growth of ADR in the United States and documents the current usage of ADR in environmental conflict resolution. Chapter III presents the methodology used in this research, and Chapter IV documents the results of the interviews with the environmental conflict resolution practitioners. Chapter V presents conclusions, recommendations, limitations, and possible areas for future research.

II. Literature Review

Chapter Overview

This chapter reviews pertinent literature in three areas. First, it reviews literature tracing the history of alternative dispute resolution (ADR) from its inception to current practice. Second, it reviews literature concerning environmental conflict resolution (ECR) to document when and how ADR is used to resolve environmental issues. Finally, it will review literature to recognize what antecedents/barriers may exist in implementing an ADR process in the Air Force.

Alternative Dispute Resolution

Dispute resolution is the act of settling disagreements between parties through means other than litigation (Nolan-Haley, 1992:1). Dispute resolution is not a new concept; in 1768 the New York Chamber of Commerce implemented arbitration to settle business disputes among tradesmen by trade practices instead of through legal channels (Singer, 1994:5). Current dispute resolution practices have grown out of a 1976 conference convened by Warren E. Burger, then Chief Justice of the Supreme Court (Singer, 1994:7; Nolan-Haley, 1992:5). The conference was known as the Roscoe E. Pond Conference on the Causes of Popular Dissatisfaction with the administration of Justice (Nolan-Haley, 1992:5). Roscoe E. Pond was Burger's inspiration for the conference; in 1906 Pond had voiced his concern that the legal system was irrelevant to the problems of most Americans (Singer, 1994:7; Nolan-Haley, 1992:5). Burger echoed this sentiment when he said, "we may well be on our way to a society overrun by hordes of lawyers, hungry as locusts, and brigades of judges in numbers never before

contemplated,” and that “we have reached the point where our systems of justice—both state and federal—may literally break down before the end of this century” (Burger, 1982:274).

Expanding on Nolan-Haley’s (1992) definition, the term alternative dispute resolution or ADR has been assigned to the field of practice where parties in a dispute use various means other than resorting to violence, strikes, litigation, or doing nothing to resolve conflict (Singer, 1994:15). ADR is popular because it saves time and money compared to the normal legal process (O’Leary and Husar, 2002:1269). Today, ADR is used in every area imaginable. Businesses are including provisions in their contracts with customers to resolve disputes by mediation and/or arbitration; workplace disputes solved through ADR encompass equal employment issues, personal conflicts, or labor disputes; family courts are referring more and more cases of family disputes (divorce/child support) to mediation; some local courts require mediation prior to trial in small claims disputes; community boards have been created to help mediate landlord-tenant disputes, neighborhood conflicts, and family rifts; even some high schools have trained students to mediate disputes between other students, between teachers and students, and even between parents and students (Singer, 1994:8-10).

One of the catalysts of current ADR usage came with the passage of the 1990 Administrative Dispute Resolution Act (ADRA), which was amended in 1996. This act required all federal agencies to develop policies on the use of ADR, appoint an ADR specialist, and provide appropriate employees with training in ADR (5 USC § 571, 1990). Along with ADRA came an executive order mandating federal agencies that litigate must use ADR techniques in appropriate cases where the federal government is involved in

litigation (Singer, 1994:10). Also in 1990, the Civil Justice Reform Act (CJRA) was passed requiring all federal district courts to create advisory committees to consider ways of reducing cost and delay of civil litigation (28 USC § 471, 1990). The CJRA directed each committee to use ADR to reduce cost and delay (Singer, 1994:10).

Elements of ADR

The true spirit of ADR is face-to-face meetings of all stakeholders in a dispute to reach a consensus on a solution (O'Leary, Durant, Fiorino, and Weiland, 1999:3).

O'Leary et al. (1999) suggested five principle elements of ADR methods (except binding arbitration): (1) the parties agree to participate in the process; (2) the parties or their representatives directly participate; (3) a third-party neutral helps the parties reach agreement but has no authority to impose a solution; (4) the parties must be able to agree on the outcome; and (5) any participant may withdraw and seek a resolution elsewhere.

ADR Techniques

The ADR process involves third-party neutrals to help the parties involved in a dispute come to a resolution. Traditional litigation can be a confrontational situation resulting in winner take all scenarios; ADR tries to downplay confrontation and develop a win-win environment where both parties feel like they have won some concessions (O'Leary and Husar, 2002:1269). Based on figure 1 (Singer, 1994:16) from Chapter 1, the following paragraphs present a description of the techniques used in ADR:

Negotiation

Negotiation is the most basic ADR technique and is considered a foundational skill for all other ADR processes (Nolan-Haley, 1992:11). Negotiation occurs when parties come together to work out an agreement on a dispute. It is an informal process involving only the parties of the dispute with no outside or third party intervention (Singer, 1994:16).

Mediation

If the parties of a dispute cannot workout their differences by themselves they will sometimes call in a third-party called a mediator. “Mediation is the intervention in a dispute or negotiation of an acceptable impartial and neutral third party, who has no decision-making authority” (Equal Employment Opportunity Commission, 2002). A mediator helps the parties communicate, analyze the conflict, find areas of common ground and explore different resolutions that may be acceptable to all the parties needs and interests (O’Leary, 2003:11). A mediator will work with the individual parties or in caucuses, to explore resolution options that might move the parties closer to resolution.

Conciliation

Conciliation is the use of a third party to improve the relationship between the parties. By improving the relationship of the parties it is hoped that the parties will have more open communication and come to a resolution (O’Leary, 2003:12; Singer 1994:24).

Facilitation

Facilitation is used to improve the flow of communication in a meeting between the parties of a dispute (O’Leary, 2003:11; Singer, 1994:24). “The term “facilitator” is often used interchangeably with the term “mediator”, but a facilitator does not typically become as involved in the substantives issues of a dispute as does a mediator” (Equal Employment Opportunity Commission, 2002). A facilitator focuses more on procedural assistance and remains impartial to the topics under discussion.

Regulatory Negotiation (Reg-Neg, Negotiated Rulemaking)

Regulatory negotiation (also known as negotiated rulemaking or reg-neg) is a process where a regulatory agency invites parties that will be affected by a proposed rule or policy “to reach agreement on the substance of the proposed agency rule, policy, or standard” (O’Leary, 2003:12). The purpose of reg-neg is to avoid judicial challenges to a new rule, policy, or standard by building consensus of the parties affected prior to implementation.

Early Neutral Evaluation

Early neutral evaluation is a process where a third party neutral, typically an expert in the “relevant legal, substantive, or technical” aspect of the dispute “hears informal evidence and arguments from all the parties involved in the dispute and issues a nonbinding report advising them about the strengths and weaknesses of their cases” (O’Leary, 2003:14). The evaluator may also include an opinion on the likely outcome if the case were to be litigated and may also help the parties narrow the scope of disagreement to help the parties reach a settlement.

Fact Finding

“Fact finding is the use of an impartial expert (or group) selected by the parties in a dispute, by the agency, or by an individual with the authority to appoint a fact finder, in order to determine what the "facts" are in a dispute” (Equal Employment Opportunity Commission, 2002). The fact finder receives information, listens to arguments, conducts additional research if necessary, evaluates the findings, and submits a report of findings that may include recommendations based upon the findings (Singer, 1994:25; O’Leary, 2003:15). Fact finding is similar to nonbinding arbitration (discussed later) but fact finding is usually less formal (O’Leary, 2003:15).

Ombuds

The idea of ombuds comes from a Scandinavian tradition in which a neutral public official would hear and investigate the public’s complaints and attempt to settle them (Nolan-Haley, 1992:204; Singer 1994:25). In the U.S. the ombud idea was adopted by organizations, both government and private, to handle employment related problems. The ombuds is a neutral who listens to the complaint, gathers facts, and promotes a resolution through mediation or counseling (Nolan-Haley, 1992:204).

Minitrials/Summary Jury Trials

Minitrials and summary jury trials are both quasijudicial processes that mirror what may happen if the cases were to go to trial. A minitrial is a process in which both parties present summaries of their case to representatives from both parties, typically the CEOs or other senior executives, who have authority to settle the dispute. The summaries contain legal bases and the merits of the case and follow more relaxed rules for discovery

and case presentation than found in a court trial (Equal Employment Opportunity Commission, 2002). The summary jury trial is similar to the minitrial except a jury is called in to hear the summaries and the jury then deliberates, makes findings of fact and/or liability. The parties are not bound by the findings of the jury. “Minitrials and summary jury trials are alike in that they both serve as a loop back to future negotiations” (O’Leary, 2003:14).

Arbitration

Arbitration is a more formalized ADR technique. In the arbitration process the parties present their case to a neutral third party who then renders a decision. Arbitration can be either binding or non-binding. If it is binding then the decision of the arbitrator is final. If it is non-binding then the parties have the option to seek other remedies (Nolan-Haley, 1992:124; Singer, 1994:15). Binding arbitration is not used in federal cases; this is because the decision would delegate legislative power to the arbitrator who is not accountable to the public for the decision (Nolan-Haley, 1992:126).

Mediation-Arbitration (Med-Arb)

This technique is used when the parties want a binding decision if they cannot reach an agreement (Singer, 1994:27). The mediator works with the parties to reach an agreement but if no agreement can be reached then the mediator typically becomes the arbitrator and decides the outcome (Singer, 1994:27, Nolan-Haley, 1992:201).

In principle, ADR is applicable across all subject areas, from workforce to acquisition to environmental disputes. The next section of this literature review discusses the specific domain of environmental conflict resolution.

Environmental Conflict Resolution

Environmental conflict resolution (ECR) is the use of ADR techniques to resolve environmental disputes (O'Leary, 2003:5-6). The first documented use of ECR in the U.S. was in 1973, when the governor of Washington invited mediators to help settle a long-standing dispute over a flood control dam on the Snoqualmie River (Bingham, 1986:1). Since that time ECR has evolved along- side other ADR processes like workplace and acquisition dispute resolution.

ECR has reached its current popularity largely due to the Environmental Protection Agency (EPA). The EPA was one of the first federal agencies to implement ADR in 1981 (Bourdeaux, O'Leary, Thornburgh, 2001:176). In 1987, the EPA issued guidelines and established a review of all enforcement actions for resolution by ADR (Bourdeaux et al., 2001:176). Today, the EPA is a leader among other federal agencies in the application of ADR to a wide range of disputes (Bourdeaux et al., 2001:176).

Types of ECR

Bingham (1986) first classified typical ECR cases into six broad categories: land use, natural resource management and use of public lands, water resources, energy, air quality, and toxics. In 2000, a survey of environmental attorneys was conducted to determine what types of environmental/natural resource areas to which the attorneys had applied ADR. The numbers in parenthesis indicate the percent of attorneys who have used the technique for that particular issue. The largest category concerned hazardous waste cleanup (53.2%), which was perhaps not surprising since the Superfund law allocates funds specifically for ADR use. The remaining categories included water

quality (36.7%), solid waste (22%), land use (18.3%), water quantity (14.7%), air pollution (13.8%), siting disputes (11.9%), oil and gas exploration (10.1%), endangered species (10.1%), and pesticides (3.7%)(109 cases; 264 responses; 2.4 average responses per case)(O’Leary and Husar, 2002:1271).

Techniques Used

The O’Leary and Husar (2002) research survey to lawyers also included a question on what type of ADR technique they used most often in ECR. Mediation was by far the most frequently used technique with an 82.6% response rate with negotiation following with 67.9% and facilitation rounding out the top three with 25.7% of the response (109 cases; 216 responses; 2 average responses per case).

The EPA (2000) listed its most-used ADR techniques as facilitation, convening, mediation, consensus-building, and ombudsmen. Convening (or conflict assessment) uses a third party to determine the cause of the dispute and identify the parties that would be affected and help those parties determine the best way to resolve the issue. Consensus-building is when people agree to work together, informally, to resolve a problem (EPA, 2000:2).

Parties Involved in ECR

Andrew (2000) listed typical parties that may be involved in ECR. These parties include: (1) state government; (2) facilitator/mediator; (3) citizen groups; (4) local government; (5) federal government; (6) potentially responsible party; (7) environmental group; and (8) private interest group. Any combination or all of these parties may be

involved in a single ECR action. This broad range, and sheer number, of interested parties increases the complexity of ECR.

Examples of ADR use in EPA Cases

Pfizer, Inc. – Site: Pfizer, Inc.’s pharmaceutical manufacturing and research facility on the Thames River in Groton, Connecticut. **Disputed Issue:** The penalty amount to be paid and terms of an injunction resulting from violation of regulations under the Resource Conservation and Recovery Act (RCRA), Clean Water Act, and Emergency Planning & Community Right-to-Know Act. **ADR Tools Used:** *Convening* to help the parties design a written ADR protocol, *neutral evaluation* of specified technical issues, and *mediation* of negotiations to reach a settlement. **ADR Participants:** Pfizer, Inc., U.S. Department of Justice, and U.S. EPA (EPA, 1999).

Washington Navy Yard – Site: The U.S. Navy’s Washington Navy Yard and Anacostia Naval Station in Washington, D.C. **Disputed Issue:** Personnel requiring training in hazardous waste management; dispute resolution procedures and termination provisions for RCRA corrective action; and size and appropriateness of civil penalties. **ADR Tool Used:** *Mediation* to schedule settlement negotiations, define and prioritize issues, exchange information, and respond to other party’s concerns. **ADR Participants:** U.S. EPA and U.S. Navy Office of General Counsel (EPA, 1999).

Antecedents/Barriers of ADR

Scholars have attempted to understand the causes of successful ADR. This section summarizes Hopper's (1996) discussion of five antecedents for the successful use of ADR. He established these antecedents through an analysis of five ADR cases pulled from a cross-section of private and government disputes. If the antecedents are not present in the process then, for the purposes of Hopper's research, they represent a barrier to ADR. The five antecedents/barriers are listed below.

Antecedent 1. If the parties have a long-term recurring relationship, then the probability of a successful ADR outcome increases.

Antecedent 2. When a formalized ADR process is established and recognized by the parties, then ADR success increases.

Antecedent 3. When senior management of the organization supports ADR use by establishing a support system, ADR has a higher probability of succeeding.

Antecedent 4. If the parties accept ADR as a sound conflict resolution approach, the ADR success increases.

Antecedent 5. As the economic ramifications increases, chances for successful resolution increases.

Based on his research, Hopper built an antecedent model (figure 2) that reflects the five antecedents that appear to be necessary for successful ADR implementation. The order of each is not important but the presence of each is (Hopper, 1996:80).

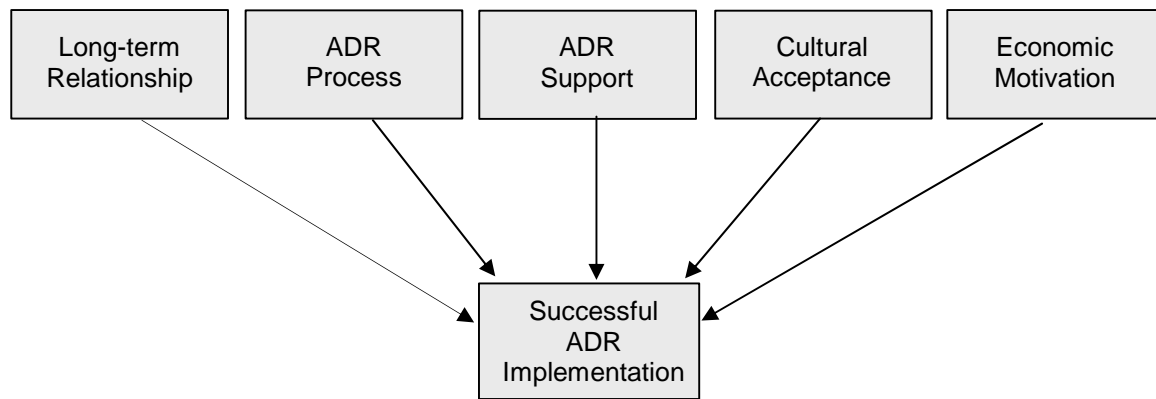


Figure 2. Hopper's Antecedent Model

Hopper suggests in his results that future researchers should include more case study examples to improve the veracity of the antecedent model (Hopper, 1996:82). He also suggests that each antecedent should be quantified based on the amount it contributes to the success of ADR (Hopper, 1996:82).

Summary

The goal of this research is to identify appropriate ADR techniques for use in environmental disputes and to determine the necessary components of successful ECR. The review of literature indicates that mediation, negotiation, and facilitation are the most often used techniques in ECR. Hopper's model provides a baseline of components necessary for successful ECR implementation. Chapter III, Methodology, will discuss the data collection method and analysis that will be used to address the study's research questions.

III. Methodology

Chapter Overview

This chapter describes the objectives and methodology of this research. First, this chapter discusses the research objectives and research paradigm for this study. Second, it discusses the qualitative research method used in the study, participant selection, and demographics. Third, it documents the data collection methodology used for this research. Fourth, it then discusses interviewing, data analysis, coding, pattern-matching, and triangulation. Fifth, it will discuss bias, validity and reliability. Finally, it summarizes Chapter III and gives an overview of Chapters IV and V.

Research Objectives

The primary purpose of this research is to assess current usage of ADR in the environmental arena and offer recommendations to the United States Air Force ADR Program Office on how to participate more effectively in the process. This study analyzes ADR techniques and processes currently in use, the antecedents that may lead to successful ADR and perceived barriers that may inhibit ADR usage. The data analyzed comes from environmental conflict resolution practitioners who have a wide range of experience in all facets of environmental dispute resolution.

Research Paradigm

This research will use a qualitative approach, content analysis, pattern matching and triangulation to determine current usage, and to suggest both antecedents of a

successful environmental ADR program and possible barriers to utilizing the ADR process in United States Air Force environmental cases.

Qualitative Research

Qualitative research is different than quantitative research and is more appropriate for collecting open-ended data with the goal of determining themes in the data (Creswell, 1994:7). A qualitative study builds a theory out of data; a quantitative study seeks to confirm a theory out of data. Research on the topic of environmental ADR in general does exist. However, this specific research focuses on the use of ADR in military environmental disputes and research in this specific domain has not been explored. The data gathered from this research will be used to build theory on this topic, and the results will be synthesized into conclusions and recommendations for improving the use of ADR in military environmental disputes.

Participant Selection

Limited documentation exists regarding the use of ADR in military/base environmental issues, which has made finding participants to interview somewhat difficult. A request to regional EPA ADR specialists for help in identifying subjects to interview only resulted in a few names. Further research of the U.S. Institute of Environmental Conflict Resolution (IECR) website revealed a searchable database of environmental conflict resolution practitioners.

The National Roster of Environmental Dispute Resolution and Consensus Building Professionals ("Roster of ECR Practitioners") is managed by the IECR, an independent, impartial federal program established by Congress to assist parties in

resolving environmental, natural resource and public lands disputes. The roster was developed with the support of the EPA (IECR, 2004).

A search was conducted using military/base experience as the searchable term. This search yielded sixty-nine practitioners. Each of the sixty-nine practitioners were contacted and asked if they would consent to be interviewed. One of the practitioners supplied two other names, bringing the total of practitioners contacted to seventy-one. Of the seventy-one, forty-one either declined or did not respond to the request; thirty initially agreed to be interviewed. Of these thirty, twenty-six practitioners were actually interviewed; the other four either did not answer the second invitation to be interviewed or were too busy to be interviewed during the interview time period.

The practitioners interviewed present a wide-selection of the practitioner populace. By collecting data from this wide-selection of practitioners this research seeks to achieve some degree of generalizability. To provide a picture of the range of practitioners interviewed the following section will present the practitioner demographics. The information presented was taken from the IECR practitioner profiles.

Practitioner Demographics

Table 1. Gender

Gender			
<u>Frequency</u>		<u>Gender</u>	<u>%</u>
18	Male		69%
8	Female		31%

Table 2. Education

Education		
*Frequency	Degree	%
14	<i>Master of Science (MS)</i>	54%
7	<i>Jurist Doctorate (JD)</i>	27%
5	<i>Doctorate (PhD)</i>	19%
4	<i>Bachelor of Art (BA)</i>	15%
3	<i>Bachelor of Science</i>	12%
3	<i>Master of Public Administration (MPA)</i>	12%
1	<i>Master of Dispute Resolution (MDR)</i>	4%
1	<i>Master of City Planning (MCP)</i>	4%
1	<i>Bachelor of Landscape Architecture (BLA)</i>	4%

*totals more than 26 because more than one degree was listed

Table 3. Position/Title

Position/Title		
Frequency	Position/Title	%
6	<i>President</i>	23%
5	<i>Owner</i>	19%
4	<i>Senior Mediator</i>	15%
3	<i>Director</i>	12%
3	<i>Mediator</i>	12%
1	<i>Senior Partner</i>	4%
1	<i>Senior Consultant</i>	4%
1	<i>Program Manager</i>	4%
1	<i>Counsel</i>	4%
1	<i>Assistant Director</i>	4%

Table 4. Organization

Type Organization		
Frequency	Organization	%
8	<i>ADR Firm</i>	31%
7	<i>Nonprofit Organization</i>	27%
5	<i>Environmental Consulting Firm</i>	19%
2	<i>Government Agency</i>	8%
1	<i>Consensus Building Practice</i>	4%
1	<i>Law Firm</i>	4%
1	<i>Public Participation & Consulting Firm</i>	4%
1	<i>Facilitation, Mediation, & Training Firm</i>	4%

Table 5. Location

States Located		
Frequency	State	%
6	<i>Colorado</i>	23%
4	<i>California</i>	15%
3	<i>Virginia</i>	12%
2	<i>DC</i>	8%
2	<i>Florida</i>	8%
2	<i>Massachusetts</i>	8%
2	<i>Utah</i>	8%
1	<i>Arizona</i>	4%
1	<i>Maryland</i>	4%
1	<i>Michigan</i>	4%
1	<i>Missouri</i>	4%
1	<i>Oregon</i>	4%

Table 6. Areas Worked

Areas Previously Worked		
*Frequency	Area	%
20	<i>Mid-Atlantic (DE,MD,NY,NJ,PA,VA,WV,DC)</i>	77%
18	<i>Mountain (CO,ID,MT,WY)</i>	69%
18	<i>Southwest (AZ,NM,NV,UT)</i>	69%
17	<i>Pacific Northwest (AK,OR,WA)</i>	65%
16	<i>California</i>	62%
15	<i>Great Lakes (IL,IN,MI,MN,OH,WI)</i>	58%
15	<i>Southeast (AL,FL,GA,KY,MS,NC,SC,TN)</i>	58%
13	<i>New England (CT,MA,ME,NH,RI,VT)</i>	50%
13	<i>South Central (AR,LA,OK,TX)</i>	50%
11	<i>North Central (IA,KS,MO,ND,NE,SD)</i>	42%
2	<i>Pacific Islands</i>	8%
1	<i>Caribbean Islands</i>	4%

*totals more than 26 because more than one area was listed

Table 7. Countries Worked

Countries Previously Worked	
<u>Country</u>	<u>Country</u>
<i>Argentina</i>	<i>Kenya</i>
<i>Australia</i>	<i>Laos</i>
<i>Bahamas</i>	<i>Luxembourg</i>
<i>Belgium</i>	<i>Malaysia</i>
<i>Belize</i>	<i>Mexico</i>
<i>Borneo</i>	<i>Morocco</i>
<i>Brazil</i>	<i>Netherlands</i>
<i>Bulgaria</i>	<i>Papua New Guinea</i>
<i>Canada</i>	<i>Philippines</i>
<i>Chile</i>	<i>Poland</i>
<i>Egypt</i>	<i>Russia</i>
<i>England</i>	<i>Sri Lanka</i>
<i>France</i>	<i>Switzerland</i>
<i>Germany</i>	<i>Tanzania</i>
<i>Haiti</i>	<i>Thailand</i>
<i>Indonesia</i>	<i>Uganda</i>
<i>Israel</i>	<i>United States</i>
<i>Japan</i>	<i>Vietnam</i>
<i>Jordan</i>	<i>Zimbabwe</i>

Table 8. Services Offered

Types of Services Offered		
<u>*Frequency</u>	<u>Services</u>	<u>%</u>
26	<i>Consensus Building</i>	100%
25	<i>Mediation</i>	96%
25	<i>Conflict Assessment/Process Design</i>	96%
24	<i>Facilitation</i>	92%
21	<i>Regulatory Negotiation</i>	81%
16	<i>Dispute System Design</i>	62%
13	<i>Neutral Evaluation/Fact Finding</i>	50%
9	<i>Superfund Allocation</i>	35%

*totals more than 26 because more than one service was listed

Table 9. Total Number of Cases in Last 10 Years

Total Number of Public Policy and Environmental Cases in the Last 10 Years		
Frequency	Cases	%
5	1 – 10 Cases	19%
2	11 – 20 Cases	8%
1	21 – 25 Cases	4%
6	26 – 35 Cases	23%
5	36 – 50 Cases	19%
6	51 – 100 Cases	23%

Table 10. Average Hours per Case

Average Hours per Case		
Frequency	Hours	%
2	Not Reported	8%
16	1 – 100 Hours	62%
6	101 – 200 Hours	23%
1	201 – 300 Hours	4%
1	301 – 400 Hours	4%

Protocol Approval

Prior to beginning this research, steps were taken to protect the interview subjects, ensure an ethical investigation per USAF research standards, and obtain approval of the interview questions. The protocol for this research was approved by two authorities—The Wright Site Institutional Review Board and Air Force Research Laboratory Chief of Aerospace Medicine. This approval process validated that the research was proper in design and ethical in practice.

Data Collection

The data was collected using a semi-structured interview format. Twenty-two interviews were conducted over the phone, four were conducted by email. Informed consent was acknowledged by the interviewee prior to the start of the interview. The

interviews were taped and transcribed. The transcribed interview was sent to each interviewee for review and concurrence. A formal informed consent notification was sent along with the transcribed interview.

Mapping Interview Questions to the Investigative Questions

Prior to conducting the interviews the Interview Questions (IQ) were developed and mapped directly to the seven Investigative Questions. The mapping of the Interview Questions to the Investigative Questions is as follows:

Investigative Question 1 asked “What are typical environmental disputes?” This question was answered through the following interview questions.

- Ø *Interview Question 1a: What types of environmental issues (i.e., water quality, solid waste, land use, etc.) have you consulted on in the past 5 years?*
- Ø *Interview Question 1b: How many of those were military related? What type of issue did the military dispute(s) involve?*
- Ø *Interview Question 1c: How many environmental disputes do you consult on per year? In your opinion is that a lot?*

Investigative Question 2 asked “Who are the parties in a typical environmental dispute?” This question was answered by the following series of interview questions.

- Ø *Interview Question 2a: What parties (i.e., local, state, federal agencies, environmental organizations) were involved (directly or indirectly) in the cases you consulted on? What was their involvement?*
- Ø *Interview Question 2b: In your experience, who normally initiates the ADR process (which party)?*
- Ø *Interview Question 2c: Do you know who initiated the process in the military case(s)?*
- Ø *Interview Question 2d: What EPA Regions have you dealt with during your consultations? Were there any differences in dealing with each Region (differing processes)?*

Investigative Question 3 asked “How are environmental disputes different from workplace and acquisition disputes?” This question was answered by the following three questions.

- Ø *Interview Question 3a: Have you consulted on any workplace or acquisition disputes?*
- Ø *Interview Question 3b: Did the ADR process used in the workplace/acquisition disputes differ from the environmental disputes? How did it differ?*
- Ø *Interview Question 3c: In your opinion which type of dispute (environmental, workplace, or acquisition) is best suited for the ADR process? Why?*

Investigative Question 4 asked “Which ADR techniques are used to resolve environmental disputes?” This question was answered through the following series of questions.

- Ø *Interview Question 4a: What type of formal resolution techniques (i.e., lawsuits) have you or your organization utilized for environmental conflicts in the past? Why?*
- Ø *Interview Question 4b: What ADR techniques have you used to resolve environmental disputes (i.e., mediation, arbitration)? Why?*
- Ø *Interview Question 4c: What ADR technique was used in the military case(s) you consulted on?*

Investigative Question 5 asked “What types of environmental disputes are most suited for resolution by ADR?” This question was answered by the following set of questions.

- Ø *Interview Question 5a: In your experience, what type of environmental dispute (i.e., water quality, solid waste, land use, etc.) do you find most suited for resolution by ADR? Why?*
- Ø *Interview Question 5b: In your opinion, are there environmental disputes that are not suited for ADR? Why?*

Investigative Question 6 asked “What are the antecedents of a successful environmental ADR program?” This question was answered through the following five questions.

In your experience (regarding parties involved in ECR),

- ∅ *Interview Question 6a: What factors in an organizational environment facilitate the use of ADR in environmental conflicts?*
- ∅ *Interview Question 6b: Do the parties involved in environmental disputes typically have a formalized ADR process in place? Do you think it was helpful? Why or why not.*
- ∅ *Interview Question 6c: Do the parties involved in environmental disputes typically have a long term recurring or single transaction relationship? Do you think these relationships have an impact on the outcome?*
- ∅ *Interview Question 6d: What influence do economic ramifications typically have on the outcome of the resolution?*
- ∅ *Interview Question 6e: What influence does legal ramifications (i.e., need to set precedence) typically have on the outcome?*

Investigative Question 7 asked “What barriers exist to implementing the process for the Air Force?” This question was answered through the following series of questions.

- ∅ *Interview Question 7a: What is your experience with ADR in environmental disputes (i.e., positive, negative, or mixed) involving the military?*
- ∅ *Interview Question 7b: What are some key indicators that an environmental issue exists? When do most parties become aware of them?*
- ∅ *Interview Question 7c: How much control do you feel you have during the ADR process (initiation, negotiation, settlement)? Do you feel this level of control is adequate? Why or why not?*
- ∅ *Interview Question 7d: Do you feel that the cases you consulted on resulted in a win-win situation? Why or why not?*
- ∅ *Interview Question 7e: What steps can the military take to be more proactive in using ADR in environmental disputes?*

Data Analysis

The information collected through the interviews will be analyzed using content analysis, coding, and pattern matching of which each will be described in the following sections.

Content Analysis

Leedy and Ormrod (2001) define content analysis as, “a detailed and systematic examination of a particular body of material for the purpose of identifying patterns, themes, or biases.” The data collected from the practitioner interviews will be scrutinized and each research question will be coded. The coded data will be analyzed for patterns, themes, and biases.

Coding

Coding is the process of taking the data and placing it in categories and then labeling (coding) that category based on its content (Creswell, 1994:154). The answers given by the practitioners to each interview question will be categorized and compiled. The data will then be reviewed again and each mention of the coded content will be marked leading to a frequency count for each category under each interview question. Once the count is complete the results should provide patterns across the the questions.

Pattern Theory

The patterns that emerge from the categories are the “culminating aspect of the entire study” (Creswell, 1994:93-94). The patterns will be used to build the theory for the entire study.

Triangulation

Triangulation occurs when “multiple sources of data converge to support a particular hypothesis or theory” (Leedy and Ormrod, 2001:105). The purpose of triangulation is to ensure the validity of the research and increase the probability that the

researchers conclusions are the most probable based on the data (Leedy and Ormrod, 2001:105). Triangulation will be accomplished in this research through the data collected from interviews, data collected from installations, and data collected from other environmental websites. These three sources of data should help validate the theory that is formulated.

Bias, Validity, and Reliability

The researcher is an acquisition person by trade and has no formal training in either ADR or the environmental sciences. The researcher has studied some ADR techniques and applications in undergraduate work and tends to view ADR as a very good process but understands that the process is not appropriate for every issue. Although the researcher bias may be minimal the same may not be said for the participants. The participants were purposefully chosen because of their wide ranging experiences in using ADR in environmental disputes, their insights into the process will be valuable and any risk of bias for utilizing ADR will be minimized through the following methods. This research will use triangulation and the use of outside sources who will independently review the data, conclusions, and recommendations. This independent assessment should prevent bias and provide for both validity and reliability.

Summary

This research will attempt to create theory by drawing conclusions on the present state of alternative dispute resolution in environmental disputes and provide recommendations based on the information from the multiple interviews and the emerging themes stemming from those interviews. Additionally, by using coding,

content analysis, pattern matching, and triangulation, the findings from this research will be reliable and valid.

The remainder of this thesis is organized as follows. Chapter IV presents the analysis of the data gained from the interviews, and Chapter V draws conclusions, makes recommendations, summarizes limitations of the study, and recommends areas for future research.

IV. Case Study Results and Analysis

Chapter Overview

Chapter IV analyzes the 25 interview questions asked of all the Environmental Conflict Resolution Practitioners. For each interview question the results of pattern matching and frequency analysis are formalized and a discussion of the analysis and the themes are presented. Specific examples from the interviews are provided as supporting rationale. This chapter also includes a section describing the Installation Restoration Program and Restoration Advisory Board, terms that were mentioned by several Practitioners during the interviews. The chapter concludes with answers to questions similar to those asked of the Practitioners from two Air Force installations who have received awards for their environmental clean-up programs. Further discussion, conclusions and recommendations are presented in Chapter V.

A total of twenty-six interviews were conducted for this thesis. Twenty-two were conducted by telephone and four were conducted by email. The following section documents those interviews and provides an analysis of the answers.

Interview Question Results

Question 1a. *What types of environmental issues have you consulted on in the past five years?*

The answers for Question 1a from all twenty-six Practitioners were analyzed, coded, grouped, and counted, and are presented in Table 1a. The Practitioners listed approximately thirty-one environmental issues that they have consulted on within the past

five years. The main objective of this question was to highlight some of the current environmental issues in society today.

Table 1a. Frequency Analysis of Practitioner Environmental Issues

Practitioner Environmental Issues			Practitioner Environmental Issues		
E	Environmental Issue	*%	E	Environmental Issue	*%
15	<i>Land Use</i>	60%	1	<i>Siting</i>	4%
14	<i>Superfund</i>	56%	1	<i>Estuary Protection</i>	4%
14	<i>Water Quality</i>	56%	1	<i>Forestry</i>	4%
9	<i>Solid Waste</i>	36%	1	<i>Agriculture</i>	4%
8	<i>Water Quantity</i>	32%	1	<i>Waste Water Treatment</i>	4%
8	<i>Clean Air</i>	32%	1	<i>Construction Claims</i>	4%
6	<i>Endangered Species</i>	24%	1	<i>Biodiversity</i>	4%
6	<i>Transportation</i>	24%	1	<i>Planning issues</i>	4%
5	<i>Wildlife Management</i>	20%	1	<i>Biotechnology</i>	4%
4	<i>"The Whole Gamut"</i>	16%	1	<i>Radioactive Waste</i>	4%
3	<i>Energy</i>	12%	1	<i>Sustainable Development</i>	4%
3	<i>Brownfields</i>	12%	1	<i>Native Treaty Rights</i>	4%
3	<i>Water Shed</i>	12%	1	<i>Natural Resource Management</i>	4%
3	<i>Ground Water</i>	12%	1	<i>Urban revitalization</i>	4%
2	<i>Environmental Justice</i>	8%	1	<i>Resource Conservation and Recovery Act (RCRA)</i>	4%
2	<i>Wetland Mitigation</i>	8%			

*Totals more than 100% due to multiple responses per party

Analysis and Patterns for Question 1a

The practitioners have consulted on a wide range of environmental issues. The top six issues, *Land Use*, *Superfund*, *Water Quality*, *Solid Waste*, *Water Quantity*, and *Clean Air*, are the same top six issues that were listed in the O'Leary (2000) survey of environmental lawyers detailed in Chapter II. The main difference between the two lists is *Land Use* is first on this list and is fourth on the O'Leary (2000) list. The frequency of responses ranged from one to fifteen; while most issues were relatively infrequently identified, a few issues were singled out as being relatively common. These included *Endangered Species*, *Transportation*, *Wildlife Management*, *Energy*, *Brownfields*, *Water*

Shed and Ground Water. Four respondents replied that they had worked the “whole gamut” of environmental issues this phrase indicates that they feel they have worked on almost all environmental issues that are prevalent today.

Question 1b. *How many of those were military related? What type of issue did the military dispute involve?*

The answers for Question 1b from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 1b. The Practitioners listed seven military environmental issues that they have consulted on within the past five years. The main objective of this question was to highlight the quantity and type of military related issues that have used some type of resolution technique.

Table 1b. Frequency Analysis of Practitioner Military Experience and Issues

Practitioner Military Experience			Practitioner Military Issues		
F	<u>Military Involvement</u>	%	F	<u>Type of Issue</u>	%
*10	1-2 Military Cases	38%	8	Superfund	44%
*4	3-4 Military Cases	15%	3	Ground Water	17%
*4	5+ Military Cases	15%	2	BRAC (Privatization Issues)	11%
3	No Military Experience	12%	2	Land Use	11%
3	Training w/Military	12%	1	Endangered Species	6%
2	Planning w/Military	8%	1	Radio Active Scrap	6%
			1	Water Quality	6%

*% based on 18 Respondents with military case experience

Analysis and Patterns Question 1b

Of the twenty-six Practitioners interviewed eighteen had actual military case experience. The three without military case experience had erroneously been classified as having military/base experience in the IECR Roster of Practitioners. The majority of the Practitioners with military/base experience have consulted on *one to four* military cases. Of the eighteen Practitioners with military case involvement 44% had worked on

Superfund issues, 17% on *Ground Water* issues, and 11% each on *BRAC* or *Land Use* issues.

Question 1c. *How many environmental disputes do you consult on per year? In your opinion is that a lot?*

The answers for Question 1c from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 1c. The Practitioners listed approximate numbers for their annual disputes and these were grouped into seven categories. The main objective of this question was to highlight a typical annual workload for an environmental dispute practitioner.

Table 1c. Frequency Analysis of Practitioner Disputes per Year

Practitioner Disputes per Year		
<u>Frequency</u>	<u>Number of Disputes</u>	<u>*%</u>
11	1-5 per year	42%
6	6-10 per year	23%
2	16-20 per year	8%
2	21-25+ per year	8%
2	Don't Know	8%
2	Keeps Fully Employed All Year	8%
1	11-15 per year	4%

*Totals more than 100% due to rounding

Analysis and Patterns Question 1c

The majority of practitioners consult on *one to ten* cases per year. This was a harder question for most Practitioners to answer because some of their cases last for longer than a year. Specifically, Practitioner #2 stated, “The projects range from things that take several years to things that take a month or so.” Practitioner #13, “In terms of the number of environmental disputes that I consult on per year, that’s kind of tough, because some of these things have been multi-year projects.” Most Practitioners felt that

the quantity of environmental cases and the time involved in handling the environmental cases keeps them fully employed at all times.

Question 2a. *What parties were involved in the cases you consulted on?*

The answers for Question 2a from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 2a. The Practitioners listed all parties (that they could recall) that had taken part in disputes they had consulted on in the past five years. The parties listed were grouped into eleven categories. The main objective of this question was to highlight the wide range of parties that can be involved.

Table 2a. Frequency Analysis of Parties Involved in Disputes

Parties Involved		
<u>Frequency</u>	<u>Party Affiliation</u>	<u>*%</u>
24	<i>Federal Government</i>	92%
23	<i>State Government</i>	88%
19	<i>Local (City/County) Government</i>	73%
17	<i>Environmental Groups</i>	65%
7	<i>Citizen Groups</i>	27%
6	<i>Corporations</i>	23%
3	<i>Tribal Government</i>	12%
3	<i>Regional Government</i>	12%
2	<i>Bankers, Lenders, Real Estate Developers</i>	8%
1	<i>Nonprofit Organizations</i>	4%
1	<i>Energy Utilities</i>	4%

*Totals more than 100% due to multiple responses per party

Analysis and Patterns Question 2a

The Practitioners listed a wide range of parties involved with the top five being *Federal Government, State Government, Local Government, Environmental Groups, and Citizen Groups*. This list is very similar to the list of typical parties from Andrew (2000) that was detailed in Chapter II. The only difference between this list and Andrew's list is the Practitioner's did not list facilitator/mediator or potentially responsible parties.

The results indicate that there is typically always some form of government entity involved as a party to the dispute and this can be attributed to the regulatory nature of environmental issues. Environmental groups, citizen groups, and other private parties are less involved as parties and their involvement tends to be based on the impact that the issue has on their lives or livelihood.

Question 2b. *In your experience who normally initiates the ADR process (which party)?*

The answers for Question 2b from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 2b. The Practitioners listed the parties whom they thought had initiated the ADR process in the disputes they had consulted on in the past five years. The parties listed were grouped into eight categories. The main objective of this question was to highlight the primary initiator of the ADR process.

Table 2b. Frequency Analysis of Parties Who Initiated the ADR Process

Parties Who Initiated		
<u>Frequency</u>	<u>Party Initiating</u>	<u>*%</u>
12	<i>Regulatory Agency (Fed/State)</i>	46%
10	<i>Government Entity (other than Regulatory Agency)</i>	38%
7	<i>One of the Parties to the Dispute</i>	27%
3	<i>Judge/Court</i>	12%
2	<i>Industry/Corporation</i>	8%
1	<i>Mutual Decision of Parties</i>	4%
1	<i>Attorney</i>	4%
1	<i>Tribal Government</i>	4%

*% Totals more than 100% due to multiple responses per party

Analysis and Patterns Question 2b

The majority of the cases these Practitioners have consulted on were initiated by a *Regulatory Agency, another Government Entity, or One of the Parties to the Dispute*. These top three answers indicate that the initiator is rarely an external party to the dispute. Practitioner #4 said, “If the case is in an administrative process (Superfund, RCRA, Brownfields, Voluntary Cleanup Process), sometimes EPA suggests that the parties use a neutral, perhaps with EPA providing the initial seed money for that retention.” Practitioner #11 noted, “Typically it is the government who has to initiate it, but they may be propelled to initiate by stakeholders.” Practitioner #22 agreed, saying, “Almost always it is the regulatory agencies because they have the funds to pay for an ADR consultant. Practitioner #26 agreed, noting the possible role of resource availability in making the decision to initiate ADR: “In most cases, the process is initiated at the request of the public agency that can afford to sponsor the upfront work of assessment and preliminary discussions with stakeholders.”

Question 2c. *Do you know who initiated the process in the military case(s)?*

The answers for Question 2c from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 2c. The Practitioners listed the parties whom they thought had initiated the ADR process in the military disputes they had consulted on in the past five years. The parties listed were grouped into eight categories. The main objective of this question was to highlight the primary initiator of the ADR process in the military cases.

Table 2c. Frequency Analysis of Initiators in Military Environmental Cases

Parties Who Initiated in Military Cases		
Frequency	Party Initiating	*%
9	EPA (regulatory agency)	35%
6	DoD	23%
5	State Agencies	19%
5	No Military Experience	19%
4	Private Parties	15%
4	Other Government Entities	15%
2	Public Parties	8%
2	Restoration Advisory Board	8%

*% Totals more than 100% due to multiple responses per party

Analysis and Patterns Question 2c

The primary initiator in the military cases was *the EPA in 35% of the cases reported*. The *DoD* or *the state regulatory agency* follow with 23% and 19% respectively. If you combine the federal and state regulatory agencies the results are 54%. The percentages show, as in Question 2b, that the primary initiators in military cases are also primary parties and there is little to no initiation by external parties.

Question 2d. *What EPA Regions have you dealt with during your consultations?
Were there any differences with each Region (differing processes)?*

The answers for Question 2d from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 2d. The Practitioners listed the regions that they have had contact with during the past five years. There are 10 Regions and EPA Headquarters which makes eleven categories. The main objective of this question was to highlight Region activity and differences when it comes to environmental ADR.

Table 2d. Frequency Analysis of EPA Regions and Region Differences

EPA Regions			EPA Region Differences		
F	Region	*%	F	Type of Differences	*%
11	Region 9 (AZ, CA, HI, NV, AS, GU)	42%	11	Not enough experience to compare	42%
9	Region 8 (CO, MT, ND, SD, UT, WY)	35%	7	Each Region is different	27%
8	Region 1 (CT, ME, MA, NH, RI, VT)	31%	2	Some Regions seem more comfortable/experienced with using a neutral	8%
7	Region 5 (IL, IN, MI, MN, OH, WI)	27%	1	Each region makes its own decisions and they can be directly contradictory	4%
7	Region 10 (AK, ID, OR, WA)	27%	1	Differences aren't applicable	4%
6	Region 2 (NJ, NY, PR, VI)	23%	1	EPA is famous for their differences on how they operate	4%
6	Region 4 (AL, FL, GA, KY, MS, NC, SC, TN)	23%	1	Agency is in very different places when it comes to using ADR	4%
5	Region 3 (DE,DC,MD,PA,VA,WV)	19%	1	Differences aren't appreciable	4%
4	Region 7 (IA,KS,MO,NE)	15%	1	It is really how much latitude any person who works for EPA is prepared to exercise their own ability and willingness to engage stakeholders	4%
4	Region 6 (AR,LA,NM,OK,TX)	15%			
3	Headquarters D.C.	12%			
*Totals more than 100% due to multiple responses			*% Totals more than 100% due to rounding		

Analysis and Patterns Question 2d

Practitioners have had the most experience in Regions 9, 8, and 1. Region 9 includes the states of Arizona, California, Hawaii, Nevada, American Samoa and Guam. Region 8 covers the states of Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming. Region 1 covers the New England states of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. Most Practitioners had only worked in one or two regions and *did not feel they had enough experience to comment on differences*. The Practitioners who have worked in many regions do believe *there are differences* among the regions. Practitioner #11, "...there are regional differences and there are personality differences, but that is par for the course." Practitioner #20, "There are some that I'd say are very ADR-adverse and there are some that are very ADR-friendly, meaning they understand the processes, they understand how community convenings work." Practitioner #26, "Each region has a different approach regarding their interests in using collaborative and ADR processes. These two regions (6 and 9) have been more disposed to use these approaches where community and public involvement issues have been critical to resolution."

Question 3a. *Have you consulted on any workplace or acquisition disputes?*

The answers for Question 3a from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 3a. The Practitioners answered either "yes" or "no" to this question and if they answered "yes" they stated either workplace or acquisition. Three Practitioners answered "yes" to both workplace and acquisition. A total of seventeen Practitioners had workplace/acquisition experience. The main objective

of this question was to establish experience in workplace/acquisition in order to ask the next set of questions which will indicate the differences between environmental disputes and workplace/acquisition.

Table 3a. Frequency Analysis of Practitioner Workplace/Acquisition Dispute Experience

Practitioner Experience in Workplace/Acquisition Disputes		
<u>Frequency</u>	<u>Experience</u>	<u>*%</u>
17	Workplace	65%
8	No Experience	31%
3	Acquisition	12%

*Totals more than 100% due to rounding

Question 3b. *Did the ADR process used in the workplace/acquisition disputes differ from the environmental disputes? How did it differ?*

The answers for Question 3b from the seventeen Practitioners who answered yes for question 3a were analyzed, coded, grouped, and counted, as presented in Table 3b. All seventeen practitioners indicated there were differences between workplace and environmental disputes. Only three practitioners had acquisition experience, and it was insufficient to draw significant conclusions; so for the purposes of this study differences will only be drawn between workplace and environmental disputes. There were twelve categories of differences between workplace and environmental disputes. The primary objective of this question was to determine the main differences between environmental disputes and workplace disputes.

Table 3b. Frequency Analysis of Differences between Workplace Disputes and Environmental Disputes

Differences Between Types of Dispute			Differences Between Types of Dispute		
F	Differences	*%	F	Differences	*%
10	Environmental disputes are multiparty/Workplace are two-party	59%	1	The deadlines are tighter in Workplace disputes	5%
5	Environmental disputes are more technically complex	29%	1	The issues may be different but the process is the same	5%
2	More of an emphasis on organizational culture in workplace disputes	12%	1	The parties are well defined in Workplace disputes/ Environmental parties are more difficult to define	5%
2	Environmental disputes have sharper value differences	12%	1	Dollar amounts are typically bigger in Environmental disputes	5%
1	Environmental disputes are bargaining within the shadow of the law/Workplace is more about equity, fairness, and improved communication	5%	1	Workplace disputes usually has one person that makes the decision/Environmental has multiple decision makers	5%
1	There are less variables in Workplace disputes	5%			

*% based on 17 respondents with multiple responses

Analysis and Patterns Question 3b

The most significant differences between environmental disputes and workplace disputes are that environmental disputes are typically *multi-party* where workplace disputes are normally two-party. The second difference is environmental disputes tend to be *very technically complex*. Practitioner #1 said, “Typically the environmental disputes I’m involved with are multi-party and very technically complex.” Practitioner #7 agreed, saying, “It differed primarily in the fact that there were fewer parties. The issues are less complex in the workplace disputes.” Practitioner #19 noted, “The workplace cases are actual mediations involving two parties who have issues with each other. The environmental cases I usually work on are group processes where consensus decision-making is more the goal.” Finally, Practitioner #22 reported, “Most environmental

disputes are substantively complex and involve multiple parties. Neutral third parties are engaged most often as facilitators, conflict assessors and process designers.”

Question 3c. *In your opinion which type of dispute (environmental, workplace, or acquisition) is best suited for the ADR process? Why?*

The answers for Question 3c from the seventeen Practitioners who answered yes for question 3a were analyzed, coded, grouped, and counted, as presented in Table 3c. Their responses resulted in four categories. The main objective of this question was to determine if one type of dispute tended to be more suitable for the ADR process.

Table 3c. Frequency Analysis of Type of Dispute Best Suited for ADR Process

Types of Disputes Best Suited for ADR		
<u>Frequency</u>	<u>Experience</u>	<u>*%</u>
8	<i>All three are suited</i>	47%
4	<i>Environmental</i>	24%
2	<i>Workplace</i>	12%
2	<i>There isn't any one ADR process (a process is developed to fit the situation)</i>	12%
1	<i>Not Answered</i>	5%
*% based on 17 respondents		

Analysis and Patterns Question 3c

The majority response for this question was absolutely *all three are suited* for resolution by ADR. Practitioner #5 stated, “I really don’t know why it would differ between any one of the three of them. There may be a pattern or practice, but my sense is they all—conflict is conflict, so you would use different tools, but I don’t think any one is necessarily better suited.” Two practitioners voiced an opinion that ADR is adaptable to varied situations, thus supporting the majority opinion. Practitioner #18, for example,

remarked, "...there isn't one ADR process. What our work is to develop a process that best suits the situation, so there are all kinds of different ADR processes, and an environmental ADR process will look different from a workplace ADR process, which will probably look different from an acquisition process." Practitioner #19, "There is no one ADR process. There are a variety of processes or interventions that can be used with differing goals, ranging from conflict prevention to conflict management to conflict resolution. Which process to use depends on the context, the issues, the parties and their goals."

Some difference of opinion was noted. For example, four practitioners (24%) thought *Environmental* issues seem to demand ADR because they are typically large, complex, multi-party conflicts and also because of the public nature of the disputes.

Question 4a. *What type of formal resolution techniques have you or your organization utilized for environmental conflicts in the past (i.e., lawsuits)? Why?*

This question was supposed to highlight what formal techniques such as lawsuit or some form of adjudication had been used by the respondent. During the interviews it became apparent that this was the wrong question to ask neutral practitioners and should really be asked of an organization or party to a dispute. Although a practitioner may take on a case that has been referred from a judge and may work on a case that eventually ends up in court, the practitioners are generally not involved in the adjudication of the case. Therefore, the answer to this question will not be used for the purposes of this research.

Question 4b. *What ADR technique have you used to resolve environmental disputes (i.e., mediation, arbitration)? Why?*

The answers for Question 4b from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 4b. The Practitioners listed all techniques that they had used for environmental disputes in the past five years. Their responses resulted in twenty categories. The main objective of this question was to determine the predominate method of resolving environmental disputes.

Table 4b. Frequency Analysis of ADR Techniques Utilized for Environmental Disputes

ADR Techniques Utilized			ADR Techniques Utilized		
E	ADR Technique	*%	E	ADR Technique	*%
20	Mediation	77%	2	Negotiated Rulemaking	8%
14	Facilitation	54%	1	Mediation-Arbitration	4%
6	Consensus Building	23%	1	Settlement Conferences	4%
5	Arbitration (binding & non)	19%	1	Summary Juries	4%
4	Public Participation	15%	1	Mini-trials	4%
3	Collaborative	12%	1	Partnering	4%
3	Fact Finding	12%	1	Facilitated Dialogue	4%
2	Allocation	8%	1	Agreement Focused Mediation	4%
2	Education/Training	8%	1	Facilitated Discussions	4%
2	Facilitated Mediation	8%	1	Assessment	4%

*Totals more than 100% due to multiple responses per party

Analysis and Patterns Question 4b

The majority of Practitioners use *mediation* or *facilitation* to help resolve environmental disputes. These two answers are similar to the O'Leary (2000) survey of environmental attorneys presented in Chapter II the top three answers in that survey were mediation, negotiation, and facilitation as determined during the present study.

The Practitioners placed a real emphasis on consensus and collaborative work. With the exception of arbitration, most of the methods in which external parties get

decision-making authority, ranked toward the bottom of the list. Practitioner #11, “The difference I would make between mediation and consensus building is that consensus building provides other opportunities for other participants to participate in the process, though not necessarily in the actual decision making.” Practitioner #13, “...public participation is sort of a discipline in itself. It’s grounded in the fundamental idea that people have a right to be involved in the decisions that have some effect on their lives.”

Most of the ADR terms in Table 4b were defined in Chapter II. Several new terms, including *facilitated mediation*, *facilitated dialogue*, *facilitated discussions*, and *agreement focused mediation*, were coined by those particular practitioners to differentiate straight mediation or facilitation.

Question 4c. *What ADR technique was used in the military case(s) you consulted on?*

The answers for Question 4c from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 4c. The Practitioners listed all techniques that they had used for military environmental disputes in the past five years. Their responses resulted in fifteen categories. The main objective of this question was to determine the predominant method of resolving military environmental disputes.

Table 4c. Frequency Analysis of ADR Techniques used in Military Cases

ADR Techniques Utilized in Military Cases		
<u>Frequency</u>	<u>ADR Technique</u>	<u>*%</u>
11	<i>Mediation</i>	44%
8	<i>Facilitation</i>	32%
5	<i>Consensus Building</i>	20%
4	<i>Education/Training</i>	16%
3	<i>No Military Experience</i>	12%
2	<i>Assessment</i>	8%
2	<i>Planning</i>	8%
2	<i>Facilitated Dialogue</i>	8%
1	<i>Fact Finding</i>	4%
1	<i>Mediation-Arbitration (nonbinding)</i>	4%
1	<i>Arbitration (nonbinding)</i>	4%
1	<i>Partnering</i>	4%
1	<i>Public Participation</i>	4%
1	<i>Facilitated Mediation</i>	4%
1	<i>Process Design</i>	4%

*% Totals more than 100% due to multiple responses per party

Analysis and Patterns Question 4c

The answers to this question mirror those in 4b. *Mediation* and *Facilitation* tend to be the most used techniques in military environmental disputes. Practitioner #15, “In the work on Lowry AFB we used focused consensus building to deploy the housing. With the Rocky Mountain Arsenal it was an ongoing restoration advisory board.” Practitioner #25, “The Goldwater [Range] case has facilitated discussions involving an area of stakeholders both within and outside of the military. Mountain Home [AFB]was more a conversation among the stakeholders to achieve resolution. Nellis [AFB] is a very large scale multi-stakeholder dialog with I think fifty or so participants...all at the table to talk about concerns and interests and recommendations relative to managing that huge land base.” Practitioner #26, “...used facilitation of an advisory committee to

address long-standing differences between the Air Force and community groups...This was not a formal ADR process...but one focused on building communication, sustaining dialogue and contributing to positive problem-solving.”

Question 5a. *In your experience, what type of environmental dispute (i.e., water quality, solid waste, land use, etc.) do you find most suited for resolution by ADR? Why?*

The answers for Question 5a from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 5a. The Practitioners stated what type of environmental dispute they thought was most suited for resolution by ADR. Their responses resulted in seven categories. The main objective of this question was to obtain the practitioners thoughts on if there are certain environmental disputes that are predisposed to resolution by ADR.

Table 5a. Frequency Analysis of Types of Dispute Suited for ADR

Types of Disputes Suited for ADR		
<u>Frequency</u>	<u>Type of Dispute</u>	<u>*%</u>
13	<i>All of them are suitable</i>	50%
7	<i>Depends on circumstances/parties</i>	27%
2	<i>Superfund & Land Use</i>	8%
1	<i>Waste Water</i>	4%
1	<i>Water Quality</i>	4%
1	<i>Water Rights/Natural Resources</i>	4%
1	<i>Can't Answer</i>	4%

*Totals more than 100% due to rounding

Analysis and Patterns Question 5a

Most of the Practitioners answered that *all disputes are suitable* or that *it depends on the circumstances/parties*, not necessarily the type of dispute. Practitioner #4, “All of

them are suitable for some process, because in all of them the alternative to ADR frequently is an unsatisfying and sometimes inconsistent judicial decision. The barriers to environmental ADR often are money, time and willingness to participate in an interactive process.” Practitioner #6, “It depends not on the subject matter in the dispute necessarily, but who the parties are, what the particular issues are, and what their attitude and relationships are.” Practitioner #20, “There isn’t anything that I don’t believe couldn’t be resolved potentially through an ADR process involving environmental disputes. If all parties are willing to talk and negotiate and find acceptable outcomes and think outside traditional means, a settlement can occur.” Practitioner #26, “The effectiveness of ADR depends not on the subject matter but on multiple factors such as the relative balance of power and resources among the parties, the availability of technical information trusted by all, the willingness to negotiate and the incentives to stay at the table for each party.”

Question 5b. *In your opinion, are there environmental disputes that are not suited for ADR? Why?*

The answers for Question 5b from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 5b. The Practitioners stated what type of environmental dispute they thought were not suited for resolution by ADR. Their responses resulted in ten categories. The main objective of this question was to obtain the practitioners thoughts on if there are certain environmental disputes that cannot be resolved by ADR.

Table 5b. Frequency Analysis of Environmental Disputes Not Suited for ADR

Environmental Disputes Not Suited for ADR		
<u>Frequency</u>	<u>Type of Dispute</u>	<u>*%</u>
8	<i>There are none that aren't suited</i>	31%
7	<i>When there is a need to establish a precedent</i>	27%
6	<i>When parties are unwilling/unable to negotiate</i>	23%
2	<i>Challenges to regulatory issues/interpretations</i>	8%
2	<i>Criminal Acts</i>	8%
2	<i>When lawyers get involved</i>	8%
1	<i>Nuclear Waste Management</i>	4%
1	<i>Novel issues of law</i>	4%
1	<i>Environmental Health Issues</i>	4%
1	<i>Depends on circumstances</i>	4%

*Totals more than 100% due to multiple responses per party

Analysis and Patterns Question 5b

The largest group of Practitioners felt that there is *no dispute that isn't suited* for ADR. A large group, however, felt that there were definitely certain types of environmental disputes that are not suited for resolution by ADR. These disputes include *the need to establish a precedent, when parties are unwilling or unable to participate, when there are challenges to regulatory issues/interpretations, or when it involves a criminal act*. Practitioner #4, “Only the usual circumstances in which ADR is generally inappropriate—a novel issue of law; the need to establish a binding precedent; parties who are unwilling or unable to negotiate for psychological reasons; lack of time, money or other resources needed to negotiate effectively or to retain a neutral.”

Question 6a. *What factors in an organizational environment facilitate the use of ADR in environmental conflicts?*

The answers for Question 6a from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 6a. The Practitioners stated what factors in an organizational environment they thought facilitated the use of ADR. Their responses resulted in twelve categories. The main objective of this question was to obtain the practitioners thoughts about organizations they have worked with to determine if there are certain characteristics of an organization that foster ADR usage in environmental disputes.

Table 6a. Frequency Analysis of Factors of an Organizational Environment

Factors of an Organizational Environment				Factors of an Organizational Environment		
F	Factor	*%		F	Factor	*%
15	Strong management support	58%		2	Direct line to decision maker	8%
8	Knowledge of ADR process	31%		2	Awareness of public reputation	8%
6	Time and Resources	23%		2	Cheerleading by upper management	8%
5	Training/Education	19%		1	Flexibility	4%
4	Empowerment of Staff	15%		1	Cultural change to collaborative problem solving	4%
3	Predisposition to mediate	12%		1	Adequate information to make decisions	4%

*Totals more than 100% due to multiple responses per party

Analysis and Patterns Question 6a

The majority of the Practitioners answered that *top management support* is definitely a major factor in an organizational environment to foster ADR use. This answer also matches Hopper's model as described in Chapter II. The next three answers *knowledge of ADR process*, *resources*, and *training of personnel* were also thought to be very important factors. Practitioner #4 stated,

It helps a great deal if you have management commitment to or support for ADR. But equally as important is having field-level personnel who are comfortable with negotiations, know what is expected of them in an ADR process, are empowered to recommend and participate in ADR, and have the authority to resolve issues or can get that authority. The field-level participants also need the time and resources to participate effectively and to know that ADR-based resolution will count as a “win” or other positive metric for the organization review and evaluation process.

Question 6b. *Do the parties involved in environmental disputes typically have a formalized ADR process in place? Do you think it was helpful? Why or why not?*

The answers for Question 6b from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 6b. The Practitioners stated whether the parties they have worked with had a formalized ADR process within their organization. Their responses resulted in six categories. The main objective of this question was to obtain the practitioner’s thoughts about organizations they have worked with to determine if a formalized ADR process within an organization was helpful in resolving the environmental dispute.

Table 6b. Frequency Analysis of Formalized ADR Processes by Parties

Formalized ADR Process		
<u>Frequency</u>	<u>Formalized ADR Process</u>	<u>%</u>
15	<i>No</i>	57%
6	<i>Some agencies do</i>	23%
2	<i>Sometimes</i>	8%
1	<i>Yes</i>	4%
1	<i>Depends</i>	4%
1	<i>Less in environmental</i>	4%

Analysis and Patterns Question 6b

The majority, 57%, of Practitioners answered *no* to this question although another 23% indicated that *some agencies* do have a formalized process in place. Hopper’s (1996)

model of ADR antecedents indicated that parties who have a formalized process in place are more likely to have successful ADR implementation. On the other hand, several Practitioners felt like Practitioner #23 who said, “I think it would be helpful for managers to have a background of ADR structures...but the advantage of the group creating it themselves is they’re now committed to the outcome. So, I wouldn’t like to see a one-size-fits-all, here’s what we do in a kind of situation book.” It is possible that the practitioners in this study had a different understanding of an “existing ADR structure” than did those in Hopper’s study. For example, an existing structure could include detailed implementation instructions, but it could also include a more modest idea that policies exist encouraging ADR use. Such differences could account for the different responses in the two studies, and indicate a need for future research.

Question 6c. *Do the parties involved in environmental disputes typically have a long-term recurring or a single transaction relationship? Do you think these relationships have an impact on the outcome?*

The answers for Question 6c from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 6c. The Practitioners stated whether the parties they have worked with had a long-term recurring or a single transaction relationship. Their responses resulted in four categories. The main objective of this question was to obtain the practitioners thoughts based on organizations they have worked with to determine if the type of relationship the parties have has an impact on the ADR process for an environmental dispute.

Table 6c. Frequency Analysis of Long-Term vs. Single Transaction

Long-Term vs. Single Transaction		
<u>Frequency</u>	<u>Relationship</u>	<u>%</u>
18	<i>Long-term recurring</i>	69%
4	<i>Varies</i>	15%
3	<i>Depends</i>	12%
1	<i>Don't have long-term but should</i>	4%

Analysis and Patterns Question 6c

The majority of Practitioners indicated that most of their cases are between parties with *long-term recurring* relationships. This answer also matches Hopper's (1996) model. Practitioner #14, "Yes, it's usually long term, and it influences the commitment to the process if people feel they're stuck dealing with each other."

Question 6d. *What influence do economic ramifications typically have on the outcome of the resolution?*

The answers for IQ 6d from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 6d. The Practitioners stated whether economic ramifications have had an influence on the outcomes of their cases. Their responses resulted in sixteen categories. The main objective of this question was to obtain the practitioner's thoughts based on organizations they have worked with to determine if economic ramifications have had an impact on the ADR process for an environmental dispute.

Table 6d. Frequency Analysis of Influence of Economic Ramifications

Influence of Economic Ramifications			Influence of Economic Ramifications		
F	Responses	*%	F	Responses	*%
8	<i>Huge/Big/Immense</i>	31%	1	<i>It is the strongest driver</i>	4%
3	<i>Economic ramifications have an impact</i>	12%	1	<i>Cost is always the elephant in the room</i>	4%
2	<i>Always a deciding factor</i>	8%	1	<i>It makes things tough</i>	4%
1	<i>Sometimes a matter can't be settled due to financial limitations</i>	4%	1	<i>They are usually pretty heavy</i>	4%
1	<i>They mean a great deal in getting to a resolution</i>	4%	1	<i>Sometimes very important, sometimes extremely important</i>	4%
1	<i>Everyone makes settlement decisions based on economic realities</i>	4%	1	<i>They need to be part of the discussion from the get-go</i>	4%
1	<i>There is never enough money to do a high-quality ADR process</i>	4%	1	<i>Depends</i>	4%
1	<i>Economic ramifications is a key motivating factor in getting people to mediate</i>	4%	1	<i>When financial stakes are high they will pursue ADR before pursuing litigation</i>	4%

*% Totals more than 100% due to rounding

Analysis and Patterns Question 6d

Economic ramifications tend to have a *huge/big/immense* influence on the outcome of the disputes. This is also a key element in the Hopper (1996) model. Practitioner #14 summarized that, “[i]t’s always a factor and not to oversimplify, but it’s always a matter of balancing the costs and the risks and who pays and who takes the risk, because there are always some unknowns.”

Question 6e. *What influence do legal ramifications (i.e., the need to set precedence) typically have on the outcome?*

The answers for Question 6e from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 6e. The Practitioners stated whether legal ramifications have had an influence on the outcomes of their cases. Their responses resulted in five categories. The main objective of this question was to obtain the

practitioner’s thoughts based on organizations they have worked with to determine if legal ramifications have had an impact on the ADR process for an environmental dispute.

Table 6e. Frequency Analysis of Influence of Legal Ramifications

Influence of Legal Ramifications		
Frequency	Responses	%
10	<i>Does have an impact (overall)</i>	38%
6	<i>Impacts whether they decide to use ADR</i>	23%
4	<i>Depends</i>	15%
4	<i>If a precedent needs to be set then ADR is not the answer</i>	15%
2	<i>Not a significant impact</i>	8%

Analysis and Patterns Question 6e

One of the Practitioners commented early on that environmental disputes are “bargaining within the shadow of the law”, therefore, it is really no surprise that the majority of Practitioners indicated that legal ramifications have some form of impact on the cases. Practitioner #15, “If they really need a precedent they should go to court and get one. So it does have an effect on whether they participate at all, that’s really the big effect. It hampers the convening.” Practitioner #17, “...people are assessing what they would have to do legally if they don’t reach agreement and probably will not agree to do anything that goes beyond what they would otherwise have to do if they were ordered by a court...”

Question 7a. *What is your experience with ADR in environmental disputes (i.e., positive, negative, or mixed) involving the military?*

The answers for Question 7a from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 7a. The Practitioners stated what their experiences have been in dealing with the military on environmental ADR cases. Their responses resulted in eight categories. The main objective of this question was to obtain the practitioner's perceptions of their experience in dealing with the military on environmental disputes.

Table 7a. Frequency Analysis of Experiences Involving the Military

Experience Involving the Military		
<u>Frequency</u>	<u>Responses</u>	<u>*%</u>
14	<i>Positive (good)</i>	54%
4	<i>Mixed</i>	15%
3	<i>No military experience</i>	12%
1	<i>Slightly negative</i>	4%
1	<i>Mixed to negative</i>	4%
1	<i>Positive to mixed</i>	4%
1	<i>Very positive</i>	4%
1	<i>Overwhelmingly positive</i>	4%

*Totals more than 100% due to rounding

Analysis and Patterns Question 7a

The majority of the answers were *positive* regarding the Practitioners experience with military cases. Only a few responses were *mixed* or *negative*. Practitioner #4, "Slightly negative—the negotiations proceeded in a fashion very similar to private party cases, but it is harder to get military entities to bring decision makers or persons with settlement authority to the table." Practitioner #13, "...it's been mixed to negative. Just

because I think it is exceedingly difficult for the military to buy into something that isn't controlled by them."

Question 7b. *What are some key indicators that an environmental issue exists? When do most parties become aware of them?*

The answers for Question 7b from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 7b. The Practitioners stated what they thought a key indicator was in determining if an environmental issue might exist. Their responses resulted in nine categories. The main objective of this question was to obtain the practitioner's perceptions of when parties might become aware of an environmental issue.

Table 7b. Frequency Analysis of Key Indicators that an Environmental Issue Exists

Key Indicators		
Frequency	Responses	%
9	Environmental/Regulatory Trigger	35%
5	That should be obvious	19%
3	The threat of a lawsuit	12%
2	Community/Public bring issue to light	8%
2	Physical indicators (dead animals/plants)	8%
2	Too late	8%
1	Changes in monitored conditions	4%
1	The project "raises the alphabet" (CERCLA, RCRA, NEPA)	4%
1	No answer	4%

*Totals more than 100% due to rounding

Analysis and Patterns Question 7b

There were varying degrees of amusement in the answers to this question mostly due to the fact that the Practitioners felt that it should be readily obvious to those who manage land or installations that there is a problem. These feelings can be seen in the *That should be obvious* and *Too late* answers. The answer with the most responses was that a key indicator is typically an *environmental/regulatory trigger*. In other words, most parties don't become aware of the environmental issue until something happens to bring it to their attention.

Question 7c. *How much control do you feel you have during the ADR process (initiation, negotiation, settlement)? Do you feel this level of control is adequate? Why or why not?*

The answers for Question 7c from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 7c. The Practitioners stated how much control they feel they have during the ADR process. Their responses resulted in seven categories. The main objective of this question was to obtain the practitioner's perceptions about who is in control during the process.

Table 7c. Frequency Analysis of Level of Control during ADR Process

Level of Control During ADR Process			Level of Control During ADR Process		
E	Responses	*%	E	Responses	*%
6	<i>I don't have control the parties do</i>	23%	3	<i>Not answered</i>	12%
5	<i>The only thing I control is who sits at the table, how the meeting is conducted, and the agenda, but not the outcome</i>	19%	2	<i>Depends</i>	8%
5	<i>I have as much control as the parties are willing to give me</i>	19%	1	<i>I've got influence and it is adequate</i>	4%
4	<i>I have a fair amount of control over what happens</i>	15%			

Analysis and Patterns Question 7c

Most of the Practitioners answered this question in the same manner. They feel they control the processes to bring the parties together but the parties control the outcomes. Practitioner #26, “Mediators need to have all the control the parties want to entrust them with. The central role is to ensure the process works as the parties have agreed it should...”

Question 7d. *Do you feel that the cases you consulted on resulted in a win-win situation? Why or why not?*

The answers for Question 7d from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 7d. The Practitioners stated whether their cases resulted in win-win situations. Their responses resulted in six categories. The main objective of this question was to obtain the practitioner’s thoughts on win-win outcomes in environmental disputes.

Table 7d. Frequency Analysis of a Win-Win Situation

Win-Win Results		
<u>Frequency</u>	<u>Responses</u>	<u>*%</u>
16	Yes	62%
4	Sometimes	15%
2	Mostly	8%
2	Depends	8%
1	I've had a positive impact	4%
1	Settlements are fair and equitable	4%

*Totals more than 100% due to rounding

Analysis and Patterns IQ 7d

A majority of Practitioners felt that their cases resulted in win-win situations. Practitioner #20, “When parties come through in an environmental situation and work

together collaboratively, it's always a win-win and there is always something that everybody's given up."

Question 7e. *What steps can the military take to be more proactive in using ADR in environmental disputes?*

The answers for Question 7e from all twenty-six Practitioners were analyzed, coded, grouped, and counted, as presented in Table 7e. The Practitioners stated what steps they thought the military (or any organization) could take to become more proactive in using ADR to settle environmental disputes. Their responses resulted in sixteen categories. The main objective of this question was to obtain the practitioner's thoughts on how the military could become more proactive in the ADR process based on their experiences dealing with the military and other large organizations.

Table 7e. Frequency Analysis of Steps to be More Proactive

Steps to be More Proactive			Steps to be More Proactive		
F	Responses	*%	F	Responses	*%
12	<i>Anticipate (be proactive early on or initiate the process)</i>	46%	3	<i>Be open and transparent</i>	12%
12	<i>Train/educate personnel</i>	46%	2	<i>Have resources available</i>	8%
6	<i>See issues from all points of view (public issue too)(don't dictate)</i>	23%	2	<i>Analyze lessons learned and develop institutional means for application (do research)</i>	8%
5	<i>Use neutrals</i>	19%	2	<i>Be flexible</i>	8%
4	<i>Use the ECR Institute</i>	15%	2	<i>Incorporate incentives to encourage resolution</i>	8%
3	<i>Top management support</i>	12%	1	<i>Not answered</i>	4%
3	<i>Look at it in a systematic way (screen cases)</i>	12%	1	<i>Consistency/Continuity within the organization</i>	4%
3	<i>Establish convening conferences and collaborative processes to talk things out (and sustain it)</i>	12%	1	<i>Elevate things when they're beyond your authority</i>	4%

*Totals more than 100% due to multiple responses per party

Analysis and Patterns Question 7e

There were many responses to this question and the top three were mentioned by multiple practitioners. Practitioner #3, “Anticipate potential conflicts and see them as opportunities to arrive at resolutions before conflict occurs. Train staff in facilitative techniques.” Practitioner #4, “Once an ADR process begins, strive to be as open and transparent as possible about the military’s interest in the negotiations.” Practitioner #26, “The military needs to be flexible in its approach to the use of ADR. It is not a tool for every situation. Rather it is more of a skill set and attitude that military personnel should be trained to apply where it can be used effectively.”

Installation Restoration Program and Restoration Advisory Board

During the course of the interviews several practitioners mentioned that they had worked with Restoration Advisory Boards through the Installation Restoration Program. The Installation Restoration Program (IRP) was established by the Department of Defense in 1975 to provide guidance and funding for the investigation and remediation of hazardous waste sites caused by historical disposal activities at military installations. The IRP follows federal, state, and local laws. The primary federal laws are the Comprehensive Environmental Response, Compensation and Liability Act also known as CERCLA and the Superfund Amendments and Reauthorization Act or SARA. The EPA is responsible for the oversight of these laws (DERP, 2004).

The Restoration Advisory Board (RAB) provides a forum for communication between community members, the military organization, and regulatory agencies. The main purpose of the RAB is to represent the interests of the general public and serve as a

community point of contact. The boards are made up of local community members, environmental regulators, local government officials, military representatives and other interested parties. The RAB encourages community participation in the cleanup process and provides community members and other stakeholders the opportunity to have meaningful dialogue with and provide advice and recommendations to the military officials (DERP, 2004).

Many bases use these programs to determine what environmental issues need to be addressed and then initiate discussions in an open forum with participants from the local community. The public is kept informed of what environmental issues the bases have and can comment on the procedures the base is using to clean up the contamination. It is a consensus building, public participation tool that has been put in place by the Department of Defense.

Installation Questions and Answers

To better understand the Defense Environmental Restoration Program, ten Air Force Base environmental points of contact were sent a questionnaire via e-mail. This method of contacting the installations was the most expeditious at this point in the research. The installations were chosen due to their outstanding environmental programs as described on the Defense Environmental Restoration Program website. The questionnaire was similar to the one the Practitioners answered. Two installations answered the questionnaire, three others indicated they did not have enough experience to answer and five others either did not respond or the point of contacts e-mail was no

longer active. The questions and answers from the two installations will be presented next.

Installation Interview Question Results

Question 1a. *What types of environmental issues (i.e., water quality, solid waste, land use, etc.) has your installation used the ADR process on in the past 5 years?*

Installation #1: The Installation Restoration Program is a DoD-funded environmental cleanup project. Its mission is to identify and mitigate soil and groundwater contamination from past military practices at XX. Risk management, water quality, water replacement, and aquifer restoration are the key environmental issues.

Installation #2: XX entered the ADR process regarding selection of Toxicity Reference Values (TRVs) for use in ecological risk assessments. TRVs are chemical exposure values found in the existing literature at which some negative effect to an organism has been observed. They are compared with levels encountered at a contamination site to assess risks to ecological receptors.

The issues mentioned here are similar to several listed in IQ 1a for the Practitioners. The main issues from these two respondents appear to be mostly water related.

Question 1b. *How many environmental disputes do you have per year?*

Installation #1: There were numerous ones in the early years of XX tenure as the manager of the program. From 1996 to 2000 there were literally dozens of disputes ranging from minor ones to major ones. The major ones often involved one and sometimes two management levels above the on-site managers. In recent years the disputes have all been handled at the local level.

Installation #2: We frequently dispute various points of procedure but usually reach resolution informally through consensus building at the base/local regulator level. We have entered into the ADR process only once since inception of the base cleanup program.

There is not a good comparison between the answer to this question from the Installations and the Practitioners but it does show that the number of major issues has

tapered off over time and any issues that occur today are typically resolved at the installation or next higher level.

Question 2a. *What parties (i.e., local, state, federal agencies, environmental organizations) were involved (directly or indirectly) in the cases in which ADR was used? What was their involvement?*

Installation #1: Air Force Center for Environmental Excellence (AFCEE), EPA, state Department of Environmental Policy (DEP). Additionally, the regulatory agencies are an integral part of the decision-making process, along with our citizen advisory group, the Plume Cleanup Team (PCT). AFCEE has a legally binding agreement with the EPA and always seeks concurrence from the state DEP. Concurrence is always sought but sometimes not received from the Plume Cleanup Team (PCT) on what the best course of action is for a particular project.

Installation #2: No non-governmental environmental organizations were involved. XX is not on the National Priorities List so no federal regulatory agencies were involved. The state provides regulatory oversight for the base cleanup program under a Federal Facilities Site Remediation Agreement (FFSRA).

The answers from the Installations are very similar to the Practitioner answer for IQ 2a. The federal and state regulatory agencies always play a role with other organizations such as citizen or environmental groups added in depending on the issue at hand.

Question 2b. *In your experience, who normally initiates the ADR process (which party)?*

Installation #1: AFCEE is the lead agency and predominantly identifies issues that need ADR support. However, professional facilitation/consensus building has been an integral part of our meetings with the regulatory agencies as well as the PCT.

Installation #2: This single experience was initiated by the Air Force.

The Practitioners listed regulatory agencies as the primary initiator (46%) with other government agencies second (38%). The Installations claimed that the Air Force was the primary initiator in their cases.

Question 2c. *Have you used/hired a third party neutral to help with the ADR process? Why?*

Installation #1: Yes. As explained above a neutral facilitator better helps us to reach resolution and deflect/reduce conflict with the stakeholders. In the long-run the money invested in professional resolution/facilitation services has returned benefits in terms of mutual respect, increased credibility and quicker decision-making and implementation of project activities related to the cleanup of soil and groundwater.

Installation #2: We did not use a third neutral party to help at the Dispute Resolution Committee (1st level) of the dispute. Because we did not reach resolution at the first level of dispute, we did use a third party neutral to help with the Senior Executive Committee at the second level of the process to assist a team of negotiators from each side to be able to reach resolution. A contractor specializing in arbitration was hired to facilitate the process. Additionally, a third party neutral panel was selected to select a fair set of TRVs as the solution.

This question was only asked of the Installations and was asked just to determine if hiring a third party neutral is a common practice in Air Force environmental disputes.

Question 3a-c. This set of questions regarding differences between workplace and acquisition disputes was not asked of the Installation respondents.

Question 4a. *What type of formal resolution techniques has your organization been party to for environmental conflicts in the past (i.e., lawsuits)? Why?*

Installation #1: There was one lawsuit that was pursued and won against the federal government regarding reimbursement for charges for municipal water connections. It involved over 700 homeowners in a nearby neighborhood where groundwater contamination from the base was present and conversion agreements made, although they originally did not cover 100 percent of all costs. This lawsuit was handled directly through the legal system.

Installation #2: None prior.

This question was asked of the Installations to see what other processes they have used to settle environmental disputes. The answer from Installation #1 is significant in that it is a very large installation that has had numerous environmental issues over

the course of its existence and the response that only one lawsuit has been pursued and won against the government which would indicate that its other dispute resolution processes are working very well.

Question 4b. *What ADR technique was used to resolve environmental disputes for your installation (i.e., consensus building, negotiation, mediation, arbitration)? Why?*

Installation #1: Consensus building is the primary technique used. Areas that it is employed include comment resolution on various technical reports involving sampling/testing of groundwater and soil, plans for conducting soil cleanup, designs for groundwater cleanup programs and even community involvement initiatives. See 2c for answer to “why”.

Installation #2: Informal, base level mediation, neutral party arbitration, neutral party decision making, and consensus building were used to resolve differing environmental disagreements for the cleanup program.

Consensus building as an ADR technique is a primary theme both here and with the Practitioner answers.

Question 5a. *In your experience, what type of environmental dispute (i.e., water quality, solid waste, land use, etc.) do you find most suited for resolution by ADR? Why?*

Installation #1: Most of our consensus building revolves around groundwater cleanup since most of our groundwater problems have moved beyond the base and underneath portions of the 4 towns. Related to that I believe the most recent and effective use of consensus building had been related to development of designs for groundwater cleanup systems for various plumes. This has been employed at two levels, the first with the regulatory agencies, and the second with the PCT citizen advisory team. In many cases numerous scenarios are presented and feedback is received, discussed and modifications have often ensued to come up with a system that meets the cleanup goals yet takes into account the preferences of the regulatory agencies and public while still balancing the various criteria within Superfund that we follow for effectiveness, implement ability, cost, etc.

Installation #2: Disputes involving procedural disagreements. A logical path can normally be negotiated that satisfies the needs of both parties.

It is hard to draw a parallel between the answers given by the Installations and the answers given by the Practitioners. The majority of Practitioners (50%) felt that all types of environmental disputes are suitable for resolution by ADR which matches essentially what Installation #2 has stated. For Installation #1 the main environmental issues revolve around water, either quality, quantity, or ground water contamination so the majority of their disputes are in regards to these problems and they therefore report that these issues are very suited to resolution by ADR.

Question 5b. *In your opinion, are there environmental disputes that are not suited for ADR? Why?*

Installation #1: I see a potential benefit for dispute resolution involving any environmental issue when there are stakeholders who are dissatisfied, angry, misinformed, and who have a valid concern. In some extreme cases it may not be worth the effort if one side has demonstrated an unwavering position and/or agenda that would make any ADR useless. In that case it might make more sense to rely on the legal avenue.

Installation #2: Philosophical differences. These differences often stem from belief and emotion and do not readily lend themselves to logical negotiation.

Both of the Installation answers matches 23% of the Practitioners who said disputes are not suited for ADR *when parties are unwilling or unable to negotiate.*

Question 6a. *What factors in an organizational environment facilitate the use of ADR in environmental conflicts?*

Installation #1: A strong management is required for any ADR to be successful. The other two components I see is a mutual desire to “do the right thing.” A common goal such as cleaning up the groundwater in a timely fashion and not bringing in personal agendas like wanting to close the base because you are anti-military. The last is funding. Without funding to implement what ADR gets you to results in disappointment and loss of credibility and begs the question “why are we wasting our time with this?”

Installation #2: Management support and conceptual buy-in at every level from immediate supervisor to upper management is critical as is legal review and support.

Both the Installation answers match the number one Practitioner answers of strong management support (58%). It is important to note that Installation #1 mentions funding as a key facilitator to ADR because funding was a primary theme within the Practitioners answers as well (23%).

Question 6b. *Do the parties involved in environmental disputes typically have a formalized ADR process in place? Do you think it was helpful? Why or why not.*

Installation #1: Yes. See answers to 1b, 2a, and 5a as they elaborate on the process/effectiveness.

Installation #2: I assume that ADR is a part of every FFSRA. It is helpful in that it provides an agreed-to dispute resolution process prior to the emergence of a dispute.

There is a difference of opinion between the Installation and Practitioner answers for this question. Most Practitioners felt the organizations they have dealt with do not have a formalized process in place (69%) but the Installations indicate that there are formalized processes within the organizations that they have dealt with. The Practitioners did indicate that some agencies do have formalized processes in place (such as the EPA) which could explain the difference in opinion on this question. The previously-mentioned suggestion that the two parties might have different implicit understandings of formal processes could also explain this finding.

Question 6c. *Do the parties involved in environmental disputes typically have a long term recurring or single transaction relationship? Do you think these relationships have an impact on the outcome?*

Installation #1: The relationship is long-term for all stakeholders involved. They include but are not limited to: AFCEE, EPA, DEP, town officials, state officials,

water districts, homeowners, PCT. The impact of the stakeholders has been dramatic in the past. Specifically for securing funding commitments from DoD in 1994 and 1996 and more recently for making decisions on what cleanup is necessary for different groundwater plumes.

Installation #2: Long term. Yes.

Both the Installations and Practitioners (69%) answered that the relationships are typically long-term and that these relationships have an impact on the outcome of the dispute.

Question 6d. *What influence do economic ramifications typically have on the outcome of the resolution?*

Installation #1: So far for the AFCEE program at XX all requirements have been funded. That is unusual for a DoD-funded environmental program but it follows from a commitment made by DoD in 1996. Obviously if a situation arose that required immediate, high-cost action, that would affect available funds in the program and might necessitate a delay in some other planned project.

Installation #2: Economic factors play an important role.

Both the Participants and the Installations agree that economic ramifications have an influence on the ADR process.

Question 6e. *What influence do legal ramifications (i.e., need to set a precedent) typically have on the outcome?*

Installation #1: That is always a concern that underlies all decision-making and is one that is always considered.

Installation #2: This is the deciding factor.

Both the Participants and the Installations agree that legal ramifications have an impact on the ADR process.

Question 7a. *What is your experience with ADR in environmental disputes (i.e., positive, negative, or mixed)?*

Installation #1: My experience is a positive one. See 2c.

Installation #2: Positive.

The majority of Practitioners (54%) had a positive experience with the military involved in an environmental ADR case. Both Installations indicated that their experiences are positive as well.

Question 7b. *What are some key indicators that an environmental issue exists? When do most parties become aware of them?*

Installation #1: With the regulatory agencies we either hear about a concern face to face in a regularly scheduled meeting or we read about it in their comment letters on a plan or design that is submitted to them for review/approval. For the public, issues tend to be raised at a PCT monthly meeting and at other meetings (conservation committees, boards of selectmen/health) and also by phone calls received. In the 1990s many of the concerns sometimes surfaced in the newspapers first but those actions have not occurred in several years.

Installation #2: If informal discussion and/or negotiations are attempted more than once and neither party can find room for movement from their starting position that the other finds agreeable an issue exists.

The response from Installation #1 matches the top Practitioner response of environmental/regulatory trigger (35%). The answer from Installation #2 does not match any answers given by the Practitioners. This answer seems to reflect an understanding that “issues” arise when low-level informal discussions fail.

Question 7c. *How much control do you feel you have during the ADR process (initiation, negotiation, settlement)? Do you feel this level of control is adequate? Why or why not?*

Installation #1: The facilitation/consensus building is funded by AFCEE yet we do not pressure the person to be slanted in any way. Again, it comes down to

management support of the process and letting the process work out the issues. We are satisfied with the process as explained before.

Installation #2: I felt the level of control was adequate. However, this may result from my agreement with the resolution.

Both Installations felt that they had adequate control during the process. It is not appropriate to compare this with the Practitioner answer as the practitioners play the role of the third party neutral and the installations are a party to the dispute.

Question 7d. *Do you feel that the cases resulted in a win-win situation? Why or why not?*

Installation #1: Yes. As discussed before if you can make everyone happy then everyone wins. Sometimes you can't do that and only some are happy. In that case it is truly important to demonstrate sufficient steps taken to hear all sides and explain the rationale for the decision that is made. Very important in this case is for the regulatory agencies to support and voice their support and the rationale to proceed in one direction over another.

Installation #2: Yes. The expert panel arrived at reference values that were much less stringent than those originally posed by the regulators. The regulators are now recommending those less stringent values at other DOD facilities in XX.

Both the Practitioners and Installations felt that the disputes they have resolved using ADR resulted in win-win situations.

Question 7e. *What steps can the military take to be more proactive in using ADR in environmental disputes?*

Installation #1: Be more open-minded. Think of the long-term potential benefits of improved credibility, quicker decision-making and potential cost-savings. We have found it more beneficial to spend money to work with the regulators and community using ADR rather than spend money trying to defend policies that are not flexible, not embracing nor directed to being a good neighbor.

Installation #2: In this ADR experience the military provided proactive support at every required level. The system worked.

The answer from Installation #1 to be more open-minded is similar to the Practitioners answer of *see issues from all points of view* (23%).

With only two bases responding the results can only provide a small insight into the current atmosphere of environmental conflict resolution in the USAF; however, the answers do mirror to some extent the answers provided by the Practitioners.

Chapter Summary

This chapter described the data collected from the interviews with the various Environmental Conflict Resolution Practitioners. Results of the content analysis and pattern matching were presented, and emerging themes and patterns were documented. Overall, the Practitioners have provided some insight on the use of ADR techniques in environmental disputes and have offered advice on how to become more involved in the process. Two military installations also presented insight into the current use of consensus building through the IRP/RAB process. Chapter V analyzes the results in more detail as they relate to the overall research questions, draws tentative conclusions, discusses limitations to the research, and suggests recommendations for future research.

V. Discussion, Conclusions, and Recommendations

Chapter Overview

Chapter IV documented the data collected and analyzed the results of the interviews with the Practitioners. Chapter V draws conclusions using the data analysis from the investigative questions to answer the overall research question. This Chapter then makes recommendations based on these conclusions to the Air Force ADR Program Office regarding the use of ADR in environmental conflicts. This chapter will also present the views of different Air Force personnel who have taken part in Installation Restoration Programs (IRP) or Restoration Advisory Boards (RAB). The views presented are meant to provide the Air Force ADR Program Office an area of focus for follow-on research. This paper concludes with a discussion on the limitations of this research, recommendations for future research and a final summary.

Investigative Question Conclusions

Chapter III mapped investigative questions to interview questions. In this section the analysis of the answers to the interview questions from Chapter IV will be used to answer the investigative questions and the overall research question.

Investigative Question 1 asked “What are typical environmental disputes?” Three interview questions were asked in order to answer this question.

- Ø *Interview Question 1a: What types of environmental issues (i.e. water quality, solid waste, land use, etc.) have you consulted on in the past 5 years?*
- Ø *Interview Question 1b: How many of those were military related? What type of issue did the military dispute(s) involve?*
- Ø *Interview Question 1c: How many environmental disputes do you consult on per year? In your opinion is that a lot?*

Investigative Question 1 – Conclusions.

The analysis has revealed that there is no one typical dispute but rather several disputes—*Superfund*, *Land Use*, and *Water Quality*— that appear to remain high on the list of disputes over time. The dispute, *Superfund*, appeared at the top of the list on both IQ 1a and 1b. Finding *Superfund* at the top of both lists is not surprising because as mentioned in Chapter II, *Superfund* issues are funded for cleanup. Several respondents noted that available funding is a critical factor; available funding makes issues more likely to be resolved.

Investigative Question 2 asked “Who are the parties in a typical environmental dispute? This question was answered by the following four questions.

- Ø *Interview Question 2a: What parties (i.e. local, state, federal agencies, environmental organizations, etc.) were involved (directly or indirectly) in the cases you consulted on? What was their involvement?*
- Ø *Interview Question 2b: In your experience, who normally initiates the ADR process (which party)?*
- Ø *Interview Question 2c: Do you know who initiated the process in the military case(s)?*
- Ø *Interview Question 2d: What EPA Regions have you dealt with during your consultations? Where there any differences in dealing with each Region (differing processes)?*

Investigative Question 2 – Conclusions.

The analysis revealed that the parties to an environmental dispute are wide ranging and varied. Since the parties to an environmental dispute can consist of two parties to hundreds of thousands of parties it is harder to pinpoint what or who a typical party would be. The parties that tend to be consistent parties to disputes and tend to be the

main initiators of the process are either the regulatory agencies (federal, state, or local) or some other governmental entity. The main reason for this appears to be that these agencies/entities tend to have the funds to spawn the process.

Investigative Question 3 asked “How are environmental disputes different from workplace and acquisition disputes?” This question was answered by the following three questions.

- Ø *Interview Question 3a: Have you consulted on any workplace or acquisition disputes?*
- Ø *Interview Question 3b: Did the ADR process used in the workplace/acquisition disputes differ from the environmental disputes? How did it differ?*
- Ø *Interview Question 3c: In your opinion which type of dispute (environmental, workplace, or acquisition) is best suited for the ADR process? Why?*

Investigative Question 3 – Conclusions.

The main differences between workplace disputes and environmental disputes are that environmental disputes are almost always multi-party disputes and workplace disputes are typically two-party disputes. The second difference is the fact that environmental disputes tend to be very technically complex whereas workplace disputes typically are not. This conclusion is based only on the differences between workplace and environmental disputes. With only three practitioners having a small amount of acquisition dispute resolution experience, a conclusion on any differences between acquisition and environmental disputes could not be made.

Investigative Question 4 asked “Which ADR techniques are used to resolve environmental disputes? This question was answered through the following three questions.

- Ø *Interview Question 4a: What type of formal resolution techniques (i.e. lawsuits) have you or your organization utilized for environmental conflicts in the past? Why?*
- Ø *Interview Question 4b: What ADR techniques have you used to resolve environmental disputes (i.e. mediation, arbitration)? Why?*
- Ø *Interview Question 4c: What ADR technique was used in the military case(s) you consulted on?*

Investigative Question 4 – Conclusions.

If an environmental dispute is resolved by ADR it is typically resolved using some form of mediation or facilitation or a combination thereof. Consensus building is also used extensively to help the parties get to the point where they can participate and resolve issues.

Investigative Question 5 asked “What types of environmental disputes are most suited for resolution by ADR? This question was answered by the following two questions.

- Ø *Interview Question 5a: In your experience, what type of environmental dispute (i.e. water quality, solid waste, land use, etc.) do you find most suited for resolution by ADR? Why?*
- Ø *Interview Question 5b: In your opinion, are there environmental disputes that are not suited for ADR? Why?*

Investigative Question 5 – Conclusions.

The overwhelming answer to this question is that almost all environmental disputes are suited for resolution by ADR. There is no one dispute that is more suited to resolution. Any dispute can be resolved by ADR if the factors involved allow it to be. The main factor in resolving the dispute is the willingness of the parties to resolve the dispute. There are, however, disputes that are inherently unsuitable for resolution by

ADR. These include criminal violations of the law, the need to set a precedent and the unwillingness of parties to even consider an ADR process.

Investigative Question 6 asked “What are the antecedents of a successful environmental ADR program?” This question was answered through the following five questions.

- Ø *Interview Question 6a: What factors in an organizational environment facilitate the use of ADR in environmental conflicts?*
- Ø *Interview Question 6b: Do the parties involved in an environmental dispute typically have a formalized ADR process in place? Do you think it was helpful? Why or why not?*
- Ø *Interview Question 6c: Do the parties involved in environmental disputes typically have a long-term recurring or single transaction relationship? Do you think these relationships have an impact on the outcome?*
- Ø *Interview Question 6d: What influence do economic ramifications typically have on the outcome of the resolution?*
- Ø *Interview Question 6e: What influence does legal ramifications (i.e. need to set precedent) typically have on the outcome?*

Investigative Question 6 – Conclusions.

The analysis showed that there are key elements in environmental ADR that tend to lead to a successful outcome. These key elements are presented in Figure 3. These key elements are similar to those found in Hopper’s (1996) antecedent model. The model has changed to show the antecedents in an inverted pyramid with *Economic/Legal Ramifications* at the bottom. *Economic/Legal Ramifications* seem to be the catalyst as to whether or not the ADR process is even initiated; if the parties don’t feel they will get a better outcome (legally or economically) through an ADR process then they are less likely to come to the table. The next level shows *Long-Term Relationships* and *Organizational Culture*. These two elements appear to be the second key elements in

progressing towards using an ADR process. If the parties are in a long-term relationship or want to maintain a long-term relationship then they are more likely to work together in an ADR process. If the culture of the organization promotes and uses ADR to resolve issues (including workplace or acquisition type disputes) then it is more likely to use ADR for other issues. The final level of key elements is, *Management Support/Employee Empowerment*, *Knowledge of ADR Process*, and *Time and Resources*. Once the ADR process has begun these three elements appear to be the key to a successful outcome. Management should maintain interest in the process as it proceeds and should empower the personnel they have sent to handle the process to make decisions for the organization. The personnel the organization sends to handle the process should have knowledge of how the ADR process works; this may mean additional training for specific personnel who then become the main ADR process agents for the organization. This process agent should also be assured that they will have adequate time and resources to work the process to resolution.

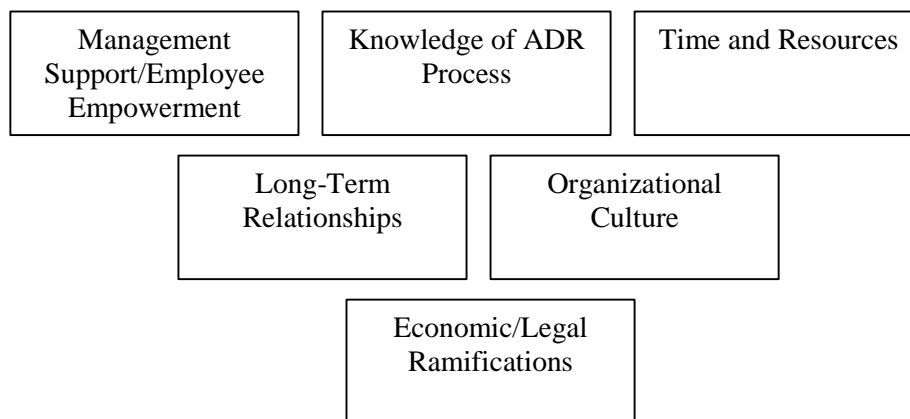


Figure 3. Key Environmental ADR Elements

Investigative Question 7 asked “What barriers exist to implementing the process for the Air Force?” This question was answered through the following five questions.

- Ø *Interview Question 7a: What is your experience with ADR in environmental disputes (i.e. positive, negative, or mixed) involving the military?*
- Ø *Interview Question 7b: What are some key indicators that an environmental issue exists? When do most parties become aware of them?*
- Ø *Interview Question 7c: How much control do you feel you have during the ADR process (initiation, negotiation, settlement)? Do you feel this level of control is adequate? Why or why not?*
- Ø *Interview Question 7d: Do you feel that the cases you consulted on resulted in win-win situation? Why or why not?*
- Ø *Interview Question 7e: What steps can the military take to be more proactive in using ADR in environmental disputes?*

Investigative Question 7 – Conclusions.

In general, the barriers to implementing the ADR process in environmental disputes appear to be the absence of one or more of the key elements found in Figure 3. Without any Air Force environmental ADR case files to research or parties to interview, it is not apparent if the Air Force is missing one or more key elements in how it approaches the cases. An in-depth study of previous cases would be helpful in determining if any barriers are present.

The interviews with Air Force installation environmental personnel, Air Force RAB members and an interview with an Air Force environmental attorney seems to indicate that formal ADR processes such as a Superfund case are not as prevalent as they were in earlier decades when cleanup of installations became a priority. Many issues are now being resolved at the base level through the collaborative RAB process.

Recommendations

The Air Force has a program in place to address the environmental aspects of operating an installation. The IRP/RAB programs have been implemented to handle these problems. So, the infrastructure is in place, and further study on the use of these programs would be helpful in determining the extent to which they help in resolving disputes before the disputes become matters that require a higher level of dispute resolution or adjudication.

Additional IRP/RAB Information

A cursory survey of RAB committee chairs and some community co-chairs elicited the following comments regarding RAB performance at Air Force installations. The members were asked to write about their experiences on the board and give their opinion on whether the boards are helpful in resolving environmental disputes at the lowest level and keeping environmental disputes from escalating.

- Ø RAB member #1: The RAB was a key community tool (especially early in the process) to build public confidence through educating the public that environmental issues were openly discussed, and proposed solutions adequately funded. RAB members and Air Force employees involved in the process all live in the surrounding community, and have a vested interest in both protecting the citizens and the environment. The XX AFB RAB had a lot of credibility addressing these issues, and also had a great public trust in the oversight process. XX AFB RAB had very few disputes in the past 10 years; however, the RAB would have been very helpful if we had disputes.
- Ø RAB member #2: We originally established our Board as an *Environmental* Advisory Board (versus the prescribed *Restoration* Advisory Board) because we saw the value in using the Board for many environmental issues beyond just the clean-up activities (which we saw eventually winding down). I co-chair with a community rep who is a local Township Trustee and school teacher. We have had a very active Board since its inception in '97, and had an active Technical Review Committee prior to that. It has been very helpful in addressing and avoiding environmental disputes here at the base. A key to that success is having

representatives on the board from the state EPA and the U.S. EPA. We have also had our share of local activists on the Board, but the terrific dynamics of the Board have quieted them down and basically made them lose interest. All without the base representative having to do a thing. We have a great working relationship with the membership on the Board which has enabled us to work through many challenging issues and a few disputes. We have even used the Board to assist with disputes/disagreements with our MAJCOM.

- Ø RAB member #3: Our RAB was extremely beneficial to us in a dispute resolution during our 1996 RCRA/HSWA permit renewal. Both the EPA and state Department of Environmental Quality (DEP) wanted some sites and processes added to our permit that would have been extremely costly, were not legally required and were not within the purview of RCRA/HSWA. XX met with the RAB to explain our situation, they expressed complete support for our position. The RAB wrote individual letters to the EPA and the state DEP before and during the public comment period expressing their concerns with the additional requirements. They also made pertinent calls to people in position of authority. Our RAB indicated repeatedly that the EPA/DEP 'represent' the public but the RAB is the public and they wanted their concerns to be taken seriously. Ultimately, a ruling came down that the additional requirements would not be added to our permit.

There were five RAB points of contact who replied that their bases had tried to establish RABs in the community but the communities were not interested. There was one active RAB point of contact who reported that the relationship between the community members of the RAB and the base was not good and very little gets accomplished during the meetings.

Base Realignment and Closure (BRAC) bases have similar programs set up to gain community involvement in reaching agreements on clean-up and other base closure issues. The terms used for the teams in the BRAC cases are BRAC Cleanup Teams (BCT) and Local Redevelopment Authorities (LRA). One recent success story of an Air Force BRAC base is Kelly AFB in San Antonio, Texas. Kelly was recognized by the National Association of Environmental Professionals with the National Environmental Excellence Award for Public Participation. "Kelly Air Force Base reached award-

winning levels of involvement through exceptional public outreach, collaboration with local organizations, and strong partnership with the community (DERP, 2004:3).” Kelly’s outstanding efforts with the community has put it on target for achieving its last remedy one year in advance of the BRAC deadline, and 11 years ahead of the Air Force goal (DERP, 2004;1)

Based on the above comments it appears that the community based boards on either active or BRAC installations play an important role in moderating issues that may arise from environmental issues caused by the installations. Further study will need to be conducted to determine the full extent in which these boards play a role in maintaining the peace within the community, and to understand differences between effective and ineffective boards.

Limitations of the Research

There were two limitations to this research – the experience of the researcher and the methodology used for this study.

Prior to conducting this study the researcher had no experience with environmental issues and only a small amount of knowledge on ADR. A better understanding of both these topics would have allowed the researcher to conduct more in-depth interviews and provide more robust information. The researcher did learn a lot about environmental issues during the interviews and utilized this information in researching the way the Air Force is currently handling environmental issues hence the information on IRP/RAB processes.

The research methodology originally selected was the case study method but the inability to find actual environmental ADR cases or parties to interview limited the methodology to a simple exploratory qualitative study. The researcher tried to counteract the lack of cases or parties by continually looking for subjects with some environmental dispute experience to interview during the course of this research hence the installation questionnaire and the RAB board member experiences.

Recommendations for Future Research

The study of the use of ADR in military environmental disputes is a new research area. The results of this study have provided some areas for future researchers to consider. These areas include:

- Ø An in-depth study of any Air Force environmental ADR case files to explore how the process was initiated, how the process progressed, and the final resolution would help to determine if the key elements are present in the case and if any are not, did the absence have an effect on the outcome.
- Ø A more detailed study of Air Force IRP/RAB programs. What is being done at the base level to keep issues from escalating? Are there really that many environmental issues any more or are we staying on top of things?
- Ø A study of the Army and Navy use of ADR in their disputes. Both of these services seem to have good working relationships with the EPA and actively use ADR in their environmental disputes. The Practitioners interviewed repeatedly mentioned the Army Corps of Engineers as their primary military customer. The Navy has an established environmental ADR website and has published success stories on the EPA website regarding clean-up of contaminated sites (note: the researcher did contact the Navy during the course of this study but received no reply).

Final Summary

This study has attempted to provide the Air Force ADR Program Office with current information on the status of the use of ADR in environmental disputes. This preliminary research has provided that information through interviews with environmental conflict resolution practitioners, a questionnaire from two Air Force installations, and some opinions from RAB board members. The Program Office also wished to know how it could utilize ADR more in environmental disputes. This study has provided some of the key elements that appear to lead to a successful ADR process. Finally, this study has provided an area for further exploration to determine if there is an Air Force ADR process already in place in the structure of the IRP/RAB program.

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Vita

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REPORT DOCUMENTATION PAGE				Form Approved OMB No. 074-0188	
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1. REPORT DATE (DD-MM-YYYY) 04 03 2005		2. REPORT TYPE Master's Thesis		3. DATES COVERED (From – To) Jun 2004 – Mar 2005	
4. TITLE AND SUBTITLE The Use of Alternative Dispute Resolution Techniques in United States Air Force Environmental Conflicts				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Pigeon, Nanci R, SMSgt, USAF				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAMES(S) AND ADDRESS(S) Air Force Institute of Technology Graduate School of Engineering and Management (AFIT/EN) 2950 Hobson Way WPAFB OH 45433-7765				8. PERFORMING ORGANIZATION REPORT NUMBER AFIT/GSP/ENV/05M-08	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Lynda Troutman O'Sullivan Assistant Deputy General Counsel (Dispute Resolution) SAF/GCD, Room 4D1000 1740 Air Force Pentagon Washington, DC 20330-1740 DSN: 222-4195				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT The use of alternative dispute resolution (ADR) in government disputes is mandated by the Administrative Dispute Resolution Act of 1990. The use of ADR to resolve disputes provides a quick and inexpensive resolution versus litigation. The Air Force currently has a very strong ADR program in place to resolve acquisition and workplace disputes. However, the varied conditions and situations of environmental issues have prevented the Air Force from achieving similar success in this area. This research analyzes the experiences of twenty-six Environmental Conflict Resolution Practitioners who have resolved environmental disputes using ADR techniques. Content analysis and pattern matching were used to provide insight into the current use of ADR techniques in military environmental disputes. The insight gained from this research provides the Air Force with information to better understand the current practices in environmental ADR and also provides areas for further research.					
15. SUBJECT TERMS Alternative Dispute Resolution, Environmental Conflict Resolution, Mediation, Negotiation, Environmental Law, Environmental Protection					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 106	19a. NAME OF RESPONSIBLE PERSON Ellen C. England, Lt Col, USAF (ENV)
a. REPORT U	b. ABSTRACT U	c. THIS PAGE U			19b. TELEPHONE NUMBER (Include area code) (937)255-6565 x4711; e-mail: ellen.england@afit.edu

Standard Form 298 (Rev: 8-98)
Prescribed by ANSI Std Z39-18